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MIND

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OF

PSYCHOLOGY AND PHILOSOPHY.

I.—THE ONE AND THE MANY.[1]

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IN this paper it is not my purpose to give a new interpretation of Plato's *Parmenides*, but to do what is perhaps more audacious—to deal with the question itself which that great dialogue has treated in its most abstract form. Whether our ultimate theory of the Universe must be "Monism" or "Pluralism" or whether any reconciliation is possible between these opposite systems—this is the question on which we are always ultimately driven back, whatever be the special philosophical problem that we may have set out to investigate. The logical controversy about the nature of universal concepts, the cosmological controversy between the thorough-going evolutionist and the "special creationist" (or his more modern counterpart, the partial evolutionist), the controversy about free-will, whether in its theological or in its psychological aspects, questions about the nature of God and the nature of the human soul, nay, even political controversies about the relation between individual liberty and state action—all bring us ultimately back to the problem, whether the multiplicity of the world that confronts us is appearance or reality, and whether in any sense the One can be Many and the Many One. The discussions of Plato's *Parmenides* and *Sophistes* may seem at first sight barren of interest to the modern reader, who is keenly concerned about the freedom of the will or about the significance and rights of the individual person. But it was the peculiar advantage of Greek philosophy to be able to carry up controversies at once to the final court of appeal, *i.e.* to purely metaphysical

[1] Read before the Aristotelian Society.

discussion in an atmosphere largely free from the bias of theological, ethical and political partisanship—largely free but not entirely, for there can be little doubt that it was through the application of Ionic and Italic philosophies to the criticism of popular religion and traditional maxims about conduct that epistemological and logical questions came into prominence. "How can we know anything?" suggests itself more easily, when the discussion affects opinion about the gods or about right and wrong, than when it deals with the more purely theoretical questions about the constitution of the physical universe. Still the Greek philosophers had only customary belief and not formulated dogmatic systems of theology to contend against or explain. John Stuart Mill has told us in his *Autobiography*[1] how his desire to defend empiricism and to provide it with an adequate system of logic was bound up with his active combatancy on behalf of "philosophical radicalism". The zeal for individual liberty in thought and in action was the main motive which induced him to attack that theory of knowledge which he regarded as the support of conservative prejudice in religion, ethics and politics; and it is quite true, that the reaction after the French Revolution against eighteenth-century free-thought was one of the chief sources of the interest in idealist metaphysics in its earlier stages. But it is best, if the logical question can be discussed without any immediate consideration of its bearing on popular beliefs or prejudices.

I.—The Logical Problem.

John Stuart Mill's is the most thorough-going attempt to build up a theory of inference and of scientific knowledge upon the basis of an ultimate pluralism—the ultimate "many," whose existence is most certain and real, being for him "sensations". Mill's endeavour to get rid of identity comes out most clearly in his acceptance of "likeness" and "unlikeness" as ultimate categories incapable of further analysis (*Logic*, book i., ch. iii., § 11). According to Mill, there is no universal except the collective universal. The universal judgment is always, and can only be, a summation of particular instances, and its truth is dependent upon the truth of the particulars. On this turns Mill's whole theory of inference. In their ultimate reality all events are, as Hume said, "loose and separate". The unity we attribute

[1] Pp. 224-226, 271-275.

to anything or to any person, the necessity we find in the causal nexus, the uniformity we presuppose in nature are mere subjective inferences of ours, due to association and liable to error, for in the last resort they are dependent merely upon an *inductio per simplicem enumerationem*. Hence there is, strictly speaking, no certainty at all in our knowledge. Even the truths of mathematics are generalisations from experience, and our experience might quite well be such that 2 and 2 made 5.

Now, is such a logical theory capable of being worked out consistently? That Mill himself worked it out consistently even his greatest admirers will hardly admit. A champion of extreme nominalism in his theory of definition, he found himself nevertheless obliged to argue for the existence of "real kinds"; and, as Mr. Herbert Spencer has acutely pointed out,[1] while impugning the principle of the inconceivability of the opposite as the test of truth, he admits the validity of the *reductio ad absurdum*, which rests on that very principle. The psychical atomism of Mill is now discarded even by those who profess themselves Empiricists. But I do not know whether those who insist that consciousness is a *continuum*, and not a collection or series of discrete feelings, always fully recognise the logical implications of their psychological theory. Prof. William James, whose *Psychology* has done so much to break down the traditional doctrine of the English empirical school, might have been prepared, one would suppose, to admit the doctrine of identity amid diversity as fundamental. But his recently published volume of Essays, *The Will to Believe, etc.*, contains a defence of "pluralism," which, though not expressly applied to logic, would certainly have been helpful to J. S. Mill in his endeavour to eliminate necessity from thought. Prof. James's "radical empiricism" has been hailed by Mr. F. C. S. Schiller (in MIND, N.S., vol. vi., No. 24) as "a declaration of the independence of the concrete whole of man, with all his passions and emotions unexpurgated, directed against the cramping rules and regulations by which the Brahmins of the academic caste are tempted to impede the free expansion of human life. The great lesson it illustrates," according to Mr. Schiller, "is that there are not really any eternal and non-human truths to prohibit us from adopting the beliefs we need to live by, nor any infallible *a priori* test of truth to screen us from the consequences of our choice." A declaration of independence from the multiplication table ought to be popular among schoolboys, and

[1] *Principles of Psychology*, ii., p. 422.

there are many persons everywhere short of cash (and not merely the Silver Party in America) who have a strong "will to believe" that something less than 2 and 2 ought to make 4. Prof. James's own claims on behalf of his doctrine seem to me much more modest than those of his enthusiastic reviewer; but he does argue that the Universe may not ultimately be one coherent system, but may contain real contingent elements,[1] and such a pluralist system (or want of system), Prof. James thinks, commends itself better than monism to the demands of our moral nature.

Now, as to the demands of our moral nature I shall have something to say presently. The first matter to be considered is, not whether a real ultimate incoherence, a real contingency, can be proved or disproved, but whether it has any intelligible meaning. That the world of our experience, the world as it appears to us, is full of the unexpected, the incongruous, the uncertain, needs no saying. If we were dependent upon experience alone, in the sense of the mere succession of sensations, should we ever have arrived at any belief in any uniformity of nature? Pluralism, says Prof. James, is the *prima facie* appearance of the world.[2] It is so—to *adult unreflective* "common-sense". Hume drew the perfectly sound conclusion from thorough-going empiricism —namely, that all certainty is an illusion. I cannot see that experience (*i.e.*, sensation or feeling-experience) alone gives us even the identity of the self or the continuity of time and space (the three *continua* that Prof. James admits). Experience alone gives merely an undifferentiated mass of feeling (I use the word here in the sense of older English psychologists), out of which we speculatively and hypothetically construct for our practical convenience a multiplicity of definite "things" existing alongside of and after one another. The unity and individuality of each of these is a unity of theory, and not of "brute fact"; and their arrangement in any one system or set of systems is also a matter of theoretical construction. Of course the greater part of the theoretical systematisation of our actual experience has been done for us by our predecessors, and is simply taken over by us in the language we learn as part of our social inheritance. But this does not affect the truth of the statement, that all that is given us as mere fact in our own individual experience is uninterpreted sensation or feeling. And the uninterpreted sensation or feeling, as Plato saw long ago, is not, and cannot be, known or intelligibly spoken

[1] *The Will to Believe, etc.*, p. 294. [2] *Ibid.*, p. viii.

about. The only test, therefore, that we can have of reality, other than this appeal to uninterpreted feeling—an appeal which can obtain no intelligible decision—is the test of coherence in thought. So that any one who throws doubt—entire doubt, as Mill does, or partial doubt, as Prof. James does—upon the worth of this test of coherence, throws doubt upon our *knowing* any reality at all. For the real which is felt is, as merely felt, not known.

A multiplicity of sensations was accepted by Hume and Mill as the datum of experience. It has been rejected by later psychologists. The isolated pure sensation is an abstraction of reflective analysis, "a psychological myth" as Mr. Ward calls it. A multiplicity of "things interacting" is not a datum or primitive fact of experience, but an hypothesis, a rough and ready "methodological device" to systematise our thinking, which does well enough for the ordinary practical business of life, but which has to be discarded by advancing scientific thought in favour of some hypothesis of one underlying substance or force manifesting itself in many ways. If a presupposition of the unity and coherence of the cosmos is necessary for the working of the sciences, and if the sciences manage to work and enable us to anticipate experience and to control nature better than we can without their aid, this presupposition is not to be disposed of by being called merely "methodological". On the other hand, a supposition like that of objective chance or real contingency, which will not work and which would prevent us carrying on scientific investigation, may be safely put aside. It will not do to suggest that "chance" in science generally is parallel to friction in mechanics. We do take account of friction in all practical applications of mechanical theory; and similarly we take account of our likelihood to err or to be ignorant; we admit "chance" as a name for our ignorance, but we do not suppose anything uncaused or happening absolutely at haphazard. The parallel of friction will not support the objectivity of chance.

Knowledge is only possible on the assumption of the absolute validity of the principle of contradiction, or to put it more widely, of the principle of coherence in thinking: the incoherent cannot be true, the true must be coherent, though the seemingly coherent is not necessarily true unless we suppose all experience exhausted. This principle in the form of the principle of contradiction or "the inconceivability of the opposite" is often treated as if it were inapplicable outside of formal logic, the logic of mere consistency. But this arises from a narrow interpretation of the principle

which makes it a mere negative counterpart of the principle of abstract identity, and from the traditional separation of these "formal laws of thought" from the principles of material truth—the Principles of Sufficient Reason, of Universal Causation and Uniformity of Nature—or however we choose to describe them. Nothing can be deduced from the principle of Contradiction absolutely *a priori*, *i.e.*, without any reference whatever to experience. In arithmetic we must get our imagination of units from what we see or touch—as a matter of fact from our fingers—or from sensations of the heart beating, etc. In geometry we must have our intuition of visible or tangible figures from which by abstraction we get the surface, the line and the point. In the Principle of Sufficient Reason the reference to the matter of experience is obvious. But both principles, or sets of principles, are the same principle of Coherence, and they differ simply in degree of abstractness. Truth, the only intelligible truth, must be one and indivisible: and the same principle which determines the validity of mathematical reasoning determines the validity of reasoning about the most complex of natural phenomena or about human affairs. We can obtain greater certainty in the more abstract than in the more concrete sphere, not because the properties of triangles are regulated by fixed order and the affairs of men given over to hazard, but simply because we can state clearly to ourselves and others all the conditions under which we make our assertions about the abstract relations of space, whereas we are constantly obliged to make rough general statements about the concrete and complex phenomena of human society without fully stating or realising the conditions and limitations necessary to make our statements accurate. Every single event or thing in the universe, we are compelled logically to believe, is ultimately related to every other and determined by the whole to which it belongs and apart from which we cannot consistently think it: so that every statement whatever about any concrete event or thing must be inaccurate, because incomplete. The only perfectly true statements are statements about abstract matters, where the nature of the abstraction is clearly stated or understood. Our ordinary judgments of perception, if taken as expressing facts, are all more or less illusions —convenient illusions, as a rule, for the ordinary business of life. "I see green grass in the sunshine"—though an artist will tell me that I don't see green at all. "I hear the postman's knock"; "I hear the College bell ringing"; "I see a cubical box lying some distance off and see that it is of

the same size as the one beside me". In all such cases it requires an effort of psychological analysis to discover the halfpenny worth of fact amid the intolerable deal of inference with which we wash it down. So, too, we continue to talk of sunrise and sunset, of the body influencing the mind and the mind the body, of ideas coming suddenly into the mind, of acts done without a motive, of chance and accident, although our physical or psychological theories may contradict these convenient illusions of unreflective thought. A universe which is one system, but a system whose infinite complexity we never grasp and to which we strive to approximate through various kinds and degrees of abstraction—such a "one in the many" is the presupposition of all science, and a complete comprehension of it is the unattainable ideal of a synthetic philosophy.

The two extreme types of philosophy are those represented in the Greek world by the Eleatics and the Heracleiteans (I say expressly the Heracleiteans, not Heracleitus, for Heracleitus himself seems to have grasped, though not in any purely logical or ontological form, the idea of a unity amid the manifold, while his paradoxical followers whom Plato ridicules, being out and out pluralists, made all assertion impossible). In modern times we find the same antithesis between Spinoza (so long as he adheres strictly to his *Omnis determinatio est negatio*) and Hume with his world where all events are "loose and separate". In other systems the same two tendencies may be traced, *e.g.*, if we contrast mediæval Realists and Nominalists or modern Idealists and Empiricists; but in none does it come out with such sharpness. The reconciliation is, however, generally some more or less unsatisfactory compromise which alternately allows the balance to incline to the side of unity or to that of diversity (*e.g.*, in Empedocles and Anaxagoras among the ancients; in Kant and Lotze among the moderns). Only Plato in his later dialogues,[1] and Aristotle not quite consistently among the ancients; in modern times only Leibniz occasionally and Hegel have really grappled with the problem of the complete and systematic reconciliation of the One and the Many. Plato's first attempt to escape from the sceptical consequences of the Heracleitean pluralism was, apparently,

[1] I here assume the truth of the theory which puts the *Parmenides*, *Sophistes* and *Philebus* later than the *Phaedo*, *Phaedrus* and *Republic*. Lutoslawski (*The Origin and Growth of Plato's Logic*, 1897) seems to me to have thoroughly established the view which Prof. Lewis Campbell had maintained and elaborately supported in his edition of the *Sophistes and Politicus*, 1867.

to take refuge, like many poetical and mystical philosophers in all ages, in a dualism which cut off Reality from Appearance—a dualism which makes the world of appearance an illusion. In the intelligible world there were "ideas" each one and separate: in the sensible world diversity. Under the influence, apparently, of a profounder study of Eleatic thought and possibly shaken from his confidence in his earlier solution by the criticisms of his brilliant young pupil, Aristotle,[1] Plato came to see that dualism puts off difficulties and does not solve them, and that to explain the world of appearance it is necessary to recognise that in the intelligible world itself there must be diversity as well as unity. In the same way Christian theology, which is just Platonism applied to the interpretation of the beliefs of the first Christians, came to recognise that the relation of God to the world and to man cannot be thought out, unless in the Divine nature itself there is diversity and not merely abstract unity. The doctrine of the Trinity is often represented by opponents and by anti-rationalist believers as if it were a mere magical violation of arithmetic, whereas it is a recognition in a theological form that the abstract category of quantity is inapplicable to what is most real—the spiritual principle which governs the universe. Aristotle, when he is expressly engaged in criticising Plato, seems to disparage unity; but it is only to "excessive unification" (*τὸ λίαν ἑνοῦν*) that he objects—to an abstract unity which excludes difference. His idealism is more fearless than Plato's earlier philosophy: for he does not seek to escape from the manifold details of the world of appearance but to find rationality (*θεῖόν τι*) in what Plato had thrust aside as irrational. Still it must be admitted that even Aristotle seems to fall back upon a notion which looks very like that of objective contingency

[1] It is Parmenides himself who is made to criticise the earlier theory of Plato; and the discussion is carried on with "the young Aristoteles who was afterwards one of the thirty". This suggests an allusion to Plato's young pupil. If we can suppose the criticisms of the *Parmenides* to be partly Aristotle's own and the views Aristotle criticises in the *Metaphysics* to be those of *οἱ τῶν εἰδῶν φίλοι* (of *Soph.*, 248A)—*i.e.*, other pupils of Plato who had adhered to the earlier doctrines of their master—the difficulty of explaining Aristotle's criticisms of the theory of ideas seems to me greatly diminished. But the question cannot be discussed here. Lutoslawski (*The Origin and Growth of Plato's Logic*, p. 401) argues that, even if we admit the possibility of an allusion to Aristotle in the "Aristoteles" of *Parm.*, Aristotle was too young to have made objections which modified the course of Plato's thought. Surely a Greek youth of eighteen or twenty might well have raised metaphysical difficulties, especially when that youth was Aristotle. Berkeley at twenty was criticising Locke in his commonplace-book.

or chance, though he describes τύχη and τὸ αὐτόματον not as positive agents, but merely as στερήσεις[1]—so that he must have held a theory of the imperfections in the universe more comparable to that of Spinoza than to that of Prof. James, who pleads for the recognition of "real evil" and "real contingency" apparently in the very same sense as that in which he wishes to maintain "a real God" and "a real moral life".[2]

In the special province of logic two extreme types of thought have been represented among us, though not with the same relentless audacity as among the Greeks. The Pure Formal Logic of Hamilton accentuates the principle of Identity in such a way as to reduce Logic to a manipulation of abstract quantities. Mill, on the other hand, resolves inference into a mere unexplained transition from one particular to another. Hamilton and Mill did not go to the extremes of Megaric (or later Eleatic) and Heracleitean (or Cyrenaic) Sophists, who, from the opposite points of view of Identity and Difference respectively, agreed in making predication impossible. But Hamilton's quantification of the predicate tends to abolish the distinction between subject and predicate which seems essential in every real judgment: and Mill's refusal to see anything "new" in the conclusion of a syllogism, unless the conclusion be absolutely disconnected with the premisses, makes inference impossible.

In logic, as commonly understood, we are only brought into the presence of the problem of the One and the Many; but the problem is certainly there, confronting us in every one of the customary divisions of logic. (1) What is the general concept? If it is said to be an abstraction from particulars, what is meant by this? Is there nothing general except the name? If so, how can we distinguish "real kinds" (which even Mill

[1] *Cf.* Mr. Stewart's remarks on τύχη and τὸ αὐτόματον in *Notes on the Nicomachean Ethics*, vol. i., pp. 259, 260.

[2] It may be urged that even Aristotle does not succeed in getting rid of a dualism such as he himself finds fault with in Plato's theory of ideas (as he understands that theory); but it may still be maintained that both Plato (in his later dialogues) and Aristotle have endeavoured to see the One in the Many and the Many in the One, instead of adopting either the one-sided theory of an Abstract Monism like the Eleatics (and the Stoics afterwards) or contenting themselves with the rough and ready "pluralism" of popular belief. When Plato is spoken of as a "dualist," it should be remembered that what he calls "matter" or "the unlimited" is described by him in more metaphysical language as "the other". It is the "not-being" which "is"—the negative element and not a second positive element alongside of the ideal element. The language in which the *Timaeus* describes the making of the physical universe is "mythical" and must not be taken literally.

recognises) from *τὰ ὁμώνυμα*? If generality is only a generality in our thought, how can we distinguish truth from falsehood in the case of any general proposition? If we are thinking rightly when we think something common to different things, must there not *be* something common to them, identical amid the difference? Either we must give up the possibility of any scientific proposition, or we must admit some amount of truth in Platonic Idealism and Mediæval Realism. (It is curious how those who speak most about the laws of nature often throw most scorn upon "Universals".) And so we arrive at the old problem: How can the many "partake" in the One? How can the One be manifested in the Many?

(2) The judgments, which we really think and utter—as distinct from artificial dried specimens in text-books—cannot be either purely analytic or purely synthetic. They cannot be either of the type "A is A" (A remaining absolutely self-identical in subject and predicate), nor of the type "A is B" (A and B being absolutely different).[1] Even in the negative judgment as really thought and uttered there must be some ground or basis of identity.[2] No one thinks it worth while to judge that "An elephant is not an illicit process of the major". All real judgments involve an identity in difference, a difference in identity. Judgments differ in degree of development—as Mr. Bosanquet has fully shown: and the most highly developed type of judgment—the disjunctive—in its logical ideal of an exhaustive enumeration of mutually exclusive alternatives makes the identity and the difference within that identity apparent in its very form.

[1] "A (*Alpha*) is ℵ (*Aleph*)" has been suggested to me as the most appropriate symbol for the judgment.

[2] Negation implies a possible affirmation, as Aristotle recognised. But Prof. James exaggerates this into falsity when he makes an absolute distinction between the affirmative judgment as objective and the negative as merely subjective (*The Will to Believe*, pp. 290, 291). A negative judgment is, as really thought or uttered, just as much a judgment about reality as an affirmative. And an affirmative judgment, as really thought or uttered, is just as much relative to some possible negation as a negative judgment is relative to a possible affirmation. "There is no God but God, and Mohammed is his prophet." Here we have a negative judgment directed against the pagans who assert the existence of other gods and an affirmative directed against those who deny that Mohammed is a true prophet. Affirmative clauses are only put into creeds when somebody is denying them. All genuine affirmation is negation of negation. "Smoking carriage" means that the rule prohibiting smoking does not hold there; just as "*Nichtraucher*" negatives the prevailing habit. Prof. James must think that the English notice says something about objective existence while the German notice does not!

(3) The whole controversy about Inference turns on the same question: Can we pass from particular to particular except through a universal, identical amid the difference of these particulars? "We have not got inference," as Mr. Bosanquet says,[1] "unless the conclusion (i.) is necessary from the premisses, and (ii.) goes beyond the premisses." This is "the paradox of inference". There must be something new, and yet there must not be anything new. It is the old puzzle about the impossibility of learning, raised by the Greek Sophists; and it is only capable of solution, if we are allowed to make the distinction between what is implicit and what is explicit—a distinction which Mill puts aside as "a mere salvo"[2]—and to recognise that identity and difference are not mutually exclusive, a conclusion which cost Plato a great dialectical struggle, and which to modern common-sense still seems absurd.

(4) The more concrete problems of logic, such as the investigation of the methods of proof in the sciences of observation and experiment, make it clear, as has been already said, that all science, all that can be called real knowledge, all that can be called "experience," in the sense in which experience supplies the materials for science, presupposes a coherent universe. The philosophical doubter, like Hume or Mr. Arthur Balfour, professes to be able to think a universe in which every event is "loose and separate," in which there is a "haphazard multiplicity of unordered succession".[3] Hume logically remains a complete sceptic, and holds that he has shown the impossibility of metaphysics; but Mr. Balfour thinks such a universe may satisfy the modest claims of philosophy, though he sees clearly enough that such a universe could never be interpreted by science. The possibility of even a few absolutely isolated, detached "phenomena" or "events" would upset the presuppositions with which science works. The accidental or contingent for science can only mean the as yet unexplained, never the uncaused or really spontaneous. Science demands a One in the Many in a much fuller sense than the co-existence of unrelated events in one Time and in one Space and (even) in one Consciousness. And surely philosophy, which attempts, however vainly, to obtain "complete unification," should not be satisfied with a lower standard of coherence, a less organised system, than satisfies the various particular sciences. It cannot settle down contented with an accept-

[1] *Essentials of Logic*, p. 137. [2] *Logic*, book ii., ch. iii., § 2.
[3] *Cf. The Foundations of Belief*, p. 154.

ance of mere plurality or multiplicity. The philosopher cannot, as such, make a system of Louis Stevenson's delightful child's-verses :—

> The world is so full of a number of things,
> I'm sure we should all be as happy as kings.

II.—The Metaphysical Problem.

Thus metaphysics receives from logic the problem of the relation between the One and the Many. That in some sense the One must be in the Many is all that the science of logic requires. How? In what sense? That is the problem which metaphysics must attempt to solve and is always attempting to solve, whether a solution be possible or not. Popular thinking, or want of thinking, is content to leave such problems alone, or to accept any partial and haphazard solution of them: and a certain kind of popular philosophy has in all ages since the time of the Greek Sophists been ready, in its fear of "letting philosophy go too far," to lend support to the intellectual indolence of "the vulgar". Prof. James's "Essays in Popular Philosophy," as he purposely calls them, are the latest important example of brilliant cleverness holding a brief for laziness and stupidity. So far as I can make out, the main theses in Prof. James's qualified defence of the pluralism of ordinary belief are these: (1) that monism resolves real facts into illusions, (2) that philosophy is bound to satisfy other demands of our nature than those of reason, and (3) that, in order to explain that free-will which is presupposed in our moral judgments, we must posit a real objective contingency in the universe. If I have done any injustice to Prof. James in formulating these theses in a few words, I must apologise and excuse myself by explaining that I am not asking for any formal condemnation of his book on the ground of its containing philosophical heresy, but that I am simply using it as a suggestive expression of a discontent with idealist philosophies that is widely felt; and of this discontent these three theses seem to me a sufficiently precise statement.

As to the opinion that monism resolves real facts into illusions, the criticism is undoubtedly applicable to strict monism like that of the Eleatics, to the predominant tendency of Spinoza's thought and to systems like those of Oriental pantheism or their modern imitations in Schopenhauer and others,—systems which treat the world of appearance in space and time as a world of illusion that we must

leave behind us in order to discover truth. But the criticism seems to me inapplicable to the later form of Plato's idealism, and inapplicable to the idealism of Aristotle, which refuses to make any absolute gap (*χωρισμός*) between the One and the Many, and least of all applicable to the philosophy of Hegel, whose whole effort is to break down the barrier which Kant had set up between the unknowable world of unintelligible *intelligibilia* and the phenomenal world of our experience, and to regard this world of phenomena in space and time as the revelation and the only revelation we can have of the ultimate reality of things (the Idea). To call the phenomenal world a world of appearance is not merely to translate Greek into Latin, but it is to express more clearly than the word "phenomenal" can now do in English, that the world of our experience, whilst not simply as it presents itself to our senses completely true, because full of self-contradiction, is nevertheless real and true in proportion as we come to see it as the manifestation of an intelligible world. "Illusions" are sensations wrongly interpreted, facts which have been so placed by us in our system of belief that they do not fit in with the rest of what we accept. The world of appearance is not as such illusory; for we believe that it admits potentially of a coherent and intelligible interpretation. Prof. James, referring to the idea—an idea not of philosophers only but of many orthodox theologians also—that the creative mind must be timeless, goes on to treat this as equivalent to the assertion that "time is an illusory appearance".[1] Now since our minds are not the creative mind but can only know things under the condition of time, where is the illusion, especially if we *know* that time is a necessary condition of the appearance of things to us? I know that I cannot see all the sides of a building at once; I am not subject to any illusion thereby, for I recognise the limitations of my knowledge. I should indeed be subject to an illusion if I judged from my own experience that the front and the back of the house could not possibly coexist in time, or that they could not be seen at once by some one who was able to look down through the roof. As already pointed out, an element of illusion enters into most of our ordinary judgments of perception; but it is an element of illusion which in practice we disregard because it is harmless and even convenient. We get rid of these illusions by psychological analysis, *i.e.*, by substituting scientific reflexion for ordinary unreflective thought.

[1] *The Will to Believe, etc.*, p. 181, note.

The contrast between "illusion" and "reality" is of a different kind from that between "appearance" and "reality". The person who has an illusion believes in it, so long as he has the illusion. He does not know it to be an illusion. When he does, he ceases to experience the illusion as an illusion. But he who is aware of an appearance continues to experience the appearance, even when he knows it to be mere appearance and can get behind it to something more real. He who knows phenomena to be mere phenomena knows them to be a partial and imperfect interpretation of reality. If a child in a moving train thinks the scenery is actually rushing past him and that the carriage in which he sits is at rest, he has an illusion: he has misplaced a real bit of experience. When he comes to know that the moving trees and houses are merely "appearance," he has got hold of a bit of reality through the appearance. The feeling of conviction, however strong, is no proof of reality; but its presence or absence is what differentiates "having an illusion" from "being aware of appearance". Prof. James in his *Principles of Psychology*[1] argues for the emotional character of the *belief* in reality—soundly enough so far as "belief" is concerned. "One of the charms of drunkenness," he says, "unquestionably lies in the deepening of the sense of reality and truth which is gained therein." And the "Will to Believe," it might be added, may resort to various forms of intoxication other than alcoholic. But let me appeal from Prof. James psychologically appreciating drunkenness to Prof. James thinking soberly. "The greatest proof," he says,[2] "that a man is *sui compos* is his ability to suspend belief in presence of an emotionally exciting idea. To give this power is the highest result of education."

Appearance (the world of phenomena) is the real, as confusedly and partially understood. It is "empirical reality": it is "objective" in the sense of existing for the general mind. The real is the apparent completely understood and seen in the light of the whole. Appearance is the appearance *of* reality. If we know "only phenomena" we must thereby know something of that of which they are phenomena. Complete comprehension, indeed, remains an ideal for knowledge—the ideal of totality: and so we must distinguish between different grades of reality. This is constantly ignored by critics of Idealism. Thus Mr. Balfour[3] speaks of the Absolute, if it is not a mere "barren abstraction," holding in suspension "without preference and without repulsion every

[1] Vol. ii., p. 284. [2] *Ibid.*, p. 308. [3] *The Foundations of Belief*, p. 146.

element alike of the knowable world". And similarly Mr. F. C. S. Schiller, in an article entitled "Lotze's Monism,"[1] says that if God be identified with the Absolute, then "all the phases of existence are *alike* characteristic of the All. God is evil as well as good, or better still, non-moral and indifferent, manifesting himself in all things *alike*."

Now, while a thorough-going Idealism must protest against the arbitrary preferences of hasty and immature thought, as Parmenides protests against the hesitation of Socrates to recognise ideas of mud and dirt, it follows that if the intelligible world be the truth of the phenomenal, we must distinguish within the world of appearance between those aspects of things which have more reality and those which have less reality in them. Where there is more contradiction and incoherence, there must be less reality than where we find rationality and organic system. Even Spinoza, who tends to deny any reality to the manifold and diverse, nevertheless recognises degrees in the extent to which things have reality.[2] Hegel has distinguished very explicitly between the mere existence or mere appearance of things and that reality which he identifies with the rational. Metaphysics cannot rest content with discovering the contradictions in the world of appearance, as it presents itself to us in our ordinary experience, or even as it is partially rearranged and translated into intelligible terms by the sciences: there remains the positive and constructive task, at least as an ideal, of a systematic exposition of the world of appearance as the manifestation of the Absolute Reality. Now this was what Hegel attempted; and it is just one of his greatest claims to our admiration, that he did take the whole task of philosophy as seriously as Plato and Aristotle had taken it. His unfortunate error lay in putting down what could only be provisional and hypothetical interpretations as if they were to be taken as final. If we are to "think" the universe we must endeavour to comprehend the meaning of nature and still more the meaning of human history and the works of the human spirit in which the manifestation of the ultimately real becomes more intelligible to us. That human history is a small thing in the whole universe and that human history is very imperfectly known to us are undoubtedly difficulties which Hegel did not recognise explicitly enough; but they are no excuse for a philosopher declining the task of trying to understand the universe so far as he can by looking at

[1] *Philosophical Review*, vol. v., p. 242. The italics are mine.

[2] *Cf. Ethica*, i., prop. 9.

those things which speak to us most clearly. Mr. Balfour has only renewed Lotze's general objection to Hegel's philosophy of history when he speaks (with special reference to Æsthetics) of "something rather forced and arbitrary in the attempts that have been made to exhibit the artistic fancies of an insignificant fraction of the human race during a very brief period of its history as essential and important elements in the development and manifestation of the 'Idea'".[1] Yet when Mr. Balfour is himself dealing with the precisely similar and much more plausible objection to the Christian idea of the Incarnation, he rightly protests against the exaltation of quantitative magnitude into a criterion of spiritual significance.[2]

We must distinguish between different grades of reality, and we are justified in interpreting the universe in terms of the highest and clearest that we know. The inorganic seems to us easier to understand than the organic, the organic than the self-conscious, only because we care to know less and expect to know less about the inorganic than about the organic, about the merely organic than about the self-conscious. Our demands for explanation become more exigent and more difficult to satisfy the more we approach the complex facts of our own personality. In geometry we only care to know about *the* triangle (*this* triangle is merely a symbol, and a very roughly drawn symbol will serve our purpose). In biology it is the species we describe and study; the individual is only a specimen, though a fairly good specimen is necessary. And similarly in sociology—so far as sociology exists as a science. But in studying human beings in history we have an interest in the individual, and we cannot rest satisfied with general causes and vague explanations. This is admirably brought out by Prof. James in his essays on "Great Men" and "The Importance of Individuals". In this also, I think, is to be found the element of truth underlying the very ambiguous statement that philosophy must satisfy other demands than those of reason. Philosophy must certainly satisfy other demands than those of the abstract understanding which works in the special sciences. No great man—no individual man whatever—can be completely explained by being analysed into general tendencies. No scientific explanation of any kind known to

[1] *The Foundations of Belief*, p. 155, note. *Cf.* Lotze, *Metaphysics*, book ii., ch. viii., § 217. "In spite of this [admission of the Copernican discoveries] they persuaded themselves that the spiritual development of their Absolute was confined to the shores of the Mediterranean."

[2] *The Foundations of Belief*, pp. 344-5.

us—no victorious and aggressive science of sociology—is likely to dispense us from the need of recognising the factor which the temperament and character of individuals—nay, the particular acts of individuals or the particular "accidents" that happen to individuals—contribute to the shaping of human affairs. (I use the term "accident" for convenience, just as biologists speak of "accidental variations," meaning those of which we do not yet know the cause.) The reason is that we are interested in human beings and human events in a far higher degree than that in which we are interested in the secular movements of the stars or in the succession of organic types. Suppose that we wished to know, not merely why plants, like ferns or *coniferæ*, are more ancient than flowering plants, or to know roughly how many centuries must have elapsed since the last glacial period in Northern Europe; suppose that we wished to know why this particular fossil fish and no other came to be embedded in this particular place where we find it, or why this particular granite boulder is lying precisely in this spot—suppose our curiosity extended so far, are we likely to get any certain and precise answers from science? But our curiosity with respect to human beings and historical events is of this very minute kind: and therefore we must be prepared to find a large unexplained residuum after our best efforts have been made at comprehending anything in regard to human history. We are dissatisfied with the general explanations that do perfectly well when applied to the great phenomena of nature. We ask for something fuller and more concrete. And though, as a matter of fact, we do know much more about the conscious and deliberate acts of many human beings (*e.g.* Cicero or Samuel Pepys) who have left us some record of their fleeting feelings and opinions, than we know or want to know about the behaviour of any individual ichthyosaurus or mammoth, our interest makes us more exacting and less content with the abstract formulæ of scientific description. The unexplained element in human things concerns us more deeply, and though it is really smaller in proportion, on any fair comparison, than in natural phenomena, it yet bulks more largely in our discontent and makes us feel the inadequacy of all attempts to think the universe as a whole, especially in those aspects of it which affect us most and which seem to promise, if we could only get at the heart of them, most insight into the meaning of things. But it is one thing to admit all this: it is another thing to disparage rational explanation and to demand something else from philosophy; it is another thing

to set up the as yet unexplained as if it were an element absolutely outside the comprehension of even the most perfect intelligence conceivable. To do this is to turn our ignorance and impatience into a measure of the universe, of what is and what is not, in a far wilder fashion than can be charged against the boldest idealist construction.

The business of philosophy must be to think the world—to carry on that work of making things intelligible which is begun by the sciences. It is relevant to object to a philosophical system that it ignores some set of facts (if they are really facts) and does not explain them, *i.e.*, does not fit them in with other facts and show their relation to the whole. It is possible and not difficult to show that every philosophical system is inadequate, because no philosopher has explained everything rightly and because all in varying degrees have erred and fallen into confusion of thought. But it is irrelevant to ask from philosophy the satisfaction of other than intellectual demands. Philosophy is not a good dinner, nor is it fine music, nor is it now-a-days the ecstasy of passionate love or of religious emotion. The consolations of philosophy must remain somewhat grey and grim. That human nature has other than intellectual needs—in fact that most human beings have very limited and easily satisfied intellectual needs—is one of those facts which philosophy must take account of, perhaps somewhat sadly. But philosophy would only be made absurd, if it were to profess to satisfy other than intellectual demands. The attempt to bring it down to the level of "the vulgar" by throwing in concessions to popular sentiment may make the name of philosophy popular but at the expense of its credit for honesty. A public which is satisfied with the political philosophy of the Declaration of Independence will doubtless be pleased with the assertion of the liberty of the individual to believe what he wants to believe. It is what people generally do, and there is no necessity to provide them with a philosophical formula to cover the nakedness of their haphazard thinking. A man may not like mathematics: he may prefer roulette. But do not let us suggest to him that he should pretend, while he travels to hell *viâ* Monte Carlo, that gambling is a superior kind of mathematics. Another person may dislike metaphysics, especially Hegelian metaphysics, and may prefer the most emotional and irrational religion he can find. But while he travels to heaven under whatever irrationalist authority he elects to follow, we need not tell him that he is a profound philosopher all the time. The truth of a scientific proposition or of a philo-

sophical theory is not refuted by any one acting as if it were not true. The straight line is the shortest distance between two points; and yet a man may go a long way round on the chance of meeting his sweetheart or in order to call at his favourite publichouse.

And the old difficulty always recurs. Whose nature is to be satisfied? Live in the sensation of the moment, if you can, and do not think about the next. But if you once begin thinking and construct some rudiments of a system, you have appealed to reason and by reason you must be judged. So long as you blindly submit, as most human beings do, to the authority or tradition under whose influence you have grown up, you can escape the arbitration of thought; but if you once begin to weigh one authority against another, whatever may be the psychological explanation of the choice you finally make, your comparison of competing authorities must be made in terms of reason.

An appeal to any other ultimate authority than that of reason is an appeal which makes discussion impossible and absurd. Plato, taking Protagoras's *Homo mensura* to mean a declaration of the rights of every individual human being's feelings, asks why Protagoras should expect us to give more weight to his own opinion than to the opinions of a pig or a baboon or a tadpole.[1] And if the appeal to reason is to be suspect, can Prof. James claim any more value for his opinions than for those of the American eagle (if there be such a bird) or of the Pope or the Sultan? If the answer be that practice is the real test of the value of opinions, we may admit that, with regard to opinions in so far as they affect practice, on the very ground that the true is the coherent. But what is our test of the relative value of different kinds of life except an appeal to reason? If the question were put to the vote, a very small minority would vote for the pursuit of philosophical thinking, even of the lively type practised by Prof. James, in comparison with the pleasures of betting at horse races or looking on at football matches. In philosophy there can be no appeal except to reason. A philosophical theory is bound to take account of the whole nature of man along with other things in the universe which seem to pay very little regard to any man's private likings, but the ultimate appeal must be to clear and distinct thinking. That system which can give the most coherent account of the seemingly chaotic world of our experience must be preferred, however unpleasing the result may be to

[1] *Theaet.* 161, C, D.

the feelings and wishes of this or that person. A system of philosophy must explain the fact of widespread beliefs as to religion and morality: it does not follow that it must confirm them all in their original form any more than that it must uphold the beliefs of unscientific "common sense" about the physical world. It is too much to expect philosophy to confirm beliefs which are often mutually self-contradictory. "The heart," it has been said, "has reasons that the reason knows not of." "True," says M. Fouillée; "but whose heart? Is it the heart of the cannibal savage or the heart of the civilised man? the heart of the Musulman or that of the Christian? Everything depends on the intelligence that is in the heart, whether it be in the reflective stage or in the stage of inherited traditional belief. The supposed conflict between intellect and feeling is in reality a conflict between one form of intellect and another, between reflective and unreflective thought."[1]

III.—The Theological and Ethical Problem.

In modern times dissatisfaction with Monism or with any reconciliation of Monism and Pluralism which does not finally give the primacy to the Many is connected, not with difficulties in the explanation of the physical universe—there Monism is easily triumphant—but with difficulties about personality. A "real personal God," a "real human soul" that cannot perish or become absorbed in anything other than its isolated self, "real absolute free will" in however restricted a domain—these moral ideas are supposed to be irreconcilable with any ultimately monistic system, and to compel us to adopt an ultimate Pluralism.

The picture-thinking of ordinary unphilosophical thought most certainly assumes a system which is pluralistic, and can only be described correctly as one of Polytheism—God being thought of as one great and powerful spirit among other independent spirits, who may indeed be his offspring, but who are governed by him only as human beings are governed by a monarch, and who can and do disobey, and who may even plan to dethrone him and set up a republican form of government.[2] Now, if a philosophy is bound to

[1] *Le Mouvement Idéaliste*, p. lx.

[2] Prof. James has suggested an even more prosaic possibility. "That the universe may actually be a sort of joint-stock society, in which the sharers have both limited liabilities and limited powers, is of course a simple and conceivable notion" (*The Will to Believe, etc.*, p. 154). The

justify in its literal form this *Vorstellung* of popular religion, then certainly pluralistic metaphysics must correspond to polytheistic theology. But the first requirement in a serious philosophy is that of self-consistency: and no picture or "myth" of this kind, whatever moral or spiritual truth it may contain, can be made self-consistent. If God is not the Absolute Being, if he is not the omnipotent, but can be really thwarted by rebellious spirits, *either* he and the other spirits are relatively independent beings within one system of things which is the true Absolute Being, *or* there is no system of things at all, and the universe is really that realm of chance in which "the materialist" is often said to believe. The Greeks advanced from the confused polytheism of primitive belief to the conception of "one God greatest among gods and men," and from that the transition was easy either to the Fate of the dramatic poets or to "the One" of Eleatic philosophy. An ultimate pluralism may be pictured, but cannot be seriously thought out. Either Fate or an Objective Chance (which is the same thing as blind Fate under another name) must control the relations between the many beings envisaged as "absolutes". That the many should be really and ultimately absolute is, so far as I can see, unthinkable, a contradiction. Each one is posited as absolute and independent. And yet each one is not absolute, because there are others, so that each is limited by the co-existence of others alongside of it; for, if not, there could be no interaction among the many. To say that the many existences are real, and that the relation between them is only "a relation," and therefore ideal, would be to fall a victim to a verbal distinction. The many can be expressed by nouns, their unity or their interaction can be expressed by an adjective or a verb: "relation" is an abstract term and "thing" is a concrete. But if the various "things" belong to one system of things, that system of things is the ultimate reality. If they do not belong to one system, we are left with something unthinkable. The isolated, independent individual is unthinkable if there be any others isolated and independent outside of it. "Isolated" is meaningless unless there are others from which a thing is isolated. There can be no real and absolute individual except the

Universe = "God and Company, Ltd.". The suggestion is not intended to be profane, but to be an accommodation to popular religious belief. To me it seems a *reductio ad absurdum* of "pluralist" philosophy or theology. It is to pass into a different intellectual atmosphere to turn to the words of St. Augustine and St. Paul: "An potius non essem nisi essem in te, *ex quo omnia, per quem omnia, in quo omnia*".

whole universe. As we have already seen, however, this one universe must be thought of not as an abstract identity but as containing a multiplicity within it, as manifesting itself as a many.

Prof. James does not speak of absolutely independent beings, but of "a plurality of semi-independent forces".[1] The world is only in part disorderly and given over to a real objective chance. The doctrine may seem less harsh; but is objective chance made any more thinkable by the plea that it is "only a little one"? The mystery is rather increased than diminished by the concession that a great part of the universe is one coherent system. That only a part and a small part of the universe is known by us from experience to be coherent, must of course be admitted; but the whole procedure of the sciences by which that part has come to be known assumes that all is coherent. How is the transition made from the necessary to the contingent? Is it gradual or is it abrupt? To contingency as a name for our ignorance, it is easy enough to give an intelligible meaning; and in that sense the accidental or the contingent may safely be talked about. It is that which we know incompletely; and there are no things, and very few aspects of things, that we know completely. But Prof. James insists on the reality of chance as something objective *in rerum natura*. "I fancy," he says, "that squeezing the thistle boldly will rob it of its sting."[2] He seems to me to have got hold of the wrong plant for his audacious experiment. "*Nemo me impune lacessit*" is the answer of the thistle, and of logic. For chance cannot be consistently thought out as any partial contradiction of necessity. With ordinary unloaded dice there is a chance of my throwing double sixes, but there is no chance of my throwing double sevens. This only means that I know the number seven cannot appear where it does not exist, while I do not know which of the various possible combinations will occur on any given occasion. Prof. James insists that possibility must be "real". This *either* means that the possible is the actual, in which case there is no longer any place for uncertainty, subjective or objective, *or* (and this of course is what Prof. James intends) it means that one alternative may happen as well as the other, which means that something may take place without a cause, a supposition that would make all science impossible, and which moreover is not seriously thinkable, for it would mean the thinking of a particular event in absolute isolation from all others.

[1] *The Will to Believe, etc.*, p. 175. [2] *Ibid.*, p. 153.

"Semi-independent" is indeed a phrase that might properly be applied to the parts of an organism; but they are certainly not intelligible nor capable of existing except in relation to the whole. And in the organism the more differentiated and individualised parts are to be found in the higher organisms, where the dependence on the whole is greater than it is in the lower forms of life. Is not the "independence" or "semi-dependence" of pluralist theory simply a mistaken interpretation of the individual which coexists with other individuals, whose very differentiation as an individual implies more complex dependences upon the whole to which it belongs? Independence of other parts or groups of parts is gained only by greater dependence upon the whole.

That there is some superficial plausibility in holding that certain regions or aspects of the universe are contingent, may however be admitted. Thus the numbers of the petals or stamina of flowers, which are definite in the case of small numbers (three in the monocotyledons, four or five in the dicotyledons) generally become indefinite and irregular when we get to numbers beyond five and six. It is as if plants were like savages who lost count beyond small figures. Nature's weakness (as Hegel would have put it) seems here to produce a real contingency. But I do not think the scientific biologist will so readily admit that the "accidental," though as yet unexplained, is absolutely inexplicable. Natural selection may account for the inaccuracy of nature when it deals with large numbers. With small numbers any deviation makes a greater relative difference in the symmetry and appearance of the flower, and so would affect the facility with which insects recognise it. But the difference, *e.g.*, between ten and eleven petals is one that does not affect the general look of a flower, and so nothing is gained by rigid observance of number. Natural selection not operating, number is determined by other causes. That may or may not be the explanation. I only mean to show that, because something *looks* as if it were a case of absolute contingency, we are not entitled to say that there may be no explanation for any intelligence whatever.[1]

[1] Leibniz, who laid so much stress on the difference between necessary and contingent truths *for us*, did not assert any absolute contingency. "The difference between necessary and contingent truths is the same as that between commensurable and incommensurable numbers. . . . Contingent truths require an infinite analysis which only God can accomplish. Accordingly, it is by him alone that these truths are known *a priori* and with certainty." *De Scientia Universali seu Calculo Philosophico* (Erdmann, p. 83 *b*).

The question of the Will is perhaps to us the most prominent form of the question about the One and the Many. The metaphysical Greek intellect, when it came to be directed into theological channels, fought out the question of the One and the Many as a question about the Trinity and the Incarnation (How the One can be a plurality; how the One, the absolutely real, can appear in space and time). The practical Western mind, trained in the conception of Roman law, fought out the same problem but only in its ethical aspect—as the problem of free will and responsibility: How can the One Divine Will be reconciled with a plurality of angelic and human wills which nevertheless must in some way be subordinate to it?[1] From Latin theology we have inherited the question of the will as our chief and typical philosophical difficulty. I cannot discuss the question here. I shall only point out (1) that "fate," in the Oriental sense, and "necessity" or "determinism" are not the same thing but contradictory. Prof. James speaks as if "*fatal* decrees" were a part of the doctrine of necessity.[2] Now the fatalist says: "Whatever you do, such and such things will happen". The determinist says: "*If* your character is of such and such a kind, and *if* circumstances of such and such a kind occur, you will act in such and such a way". The fatalist's proposition is always absolutely categorical: it denies any hypothesis. The determinist's proposition is always hypothetical: and the hypothesis is one which in the case of a human being can never be certainly known to be true. Those who think psychological determinism inconsistent with that freedom which morality presupposes argue exactly as if we were to hold the first law of motion a dangerous doctrine, because if it were true we should be afraid to get up and walk, lest we should never stop. If the idea of the *vis inertiæ* is sound, we had best never begin to read Prof. James's book, because once beginning we shall never be able to stop reading it. The psychologist like any other scientific person is obliged to deal with abstractions. His propositions, if carefully stated, must always, like all carefully stated scientific propositions, take the hypothetical form. "Possibilities that fail to get realised are, for determinism, pure illusions," says Prof. James.[3] No; they are only abstractions. They are what would have happened, had certain conditions been different. The concrete reality is what does happen.

[1] *Cf.* Maine, *Ancient Law*, p. 353 *seq.* [2] *The Will to Believe, etc.*, p. 180.
[3] *Ibid.*, p. 151.

(2) With regard to the theological, as distinct from the psychological, aspect of the question of the will, a difficulty arises in every attempt to think of man as endowed in any respect with an absolute free-will independent of the "Eternal Decrees" of God. If we picture God making man with free-will and then looking on to see what happens, ignorant of the result, there is conceivably a more powerful, and more prescient being who knows what will happen as the result of the first God's action. This latter being is therefore God. If this latter does not in every respect know or determine what will happen, he is not yet God and so on till we admit an all-knowing and all-powerful God—*Ens realissimum.*

That there are difficulties in this way of thinking of an Absolute being and the relation of such a being to the particular things in the universe is true enough. But is any less philosophical system of theology free from difficulties? Only so long as we avoid thinking them out.

Inferences *a posteriori*, as is recognised both by Kant and by J. S. Mill in his essay on "Theism," can only make probable the existence of an Intelligence of great but not of absolute power. But than such a being a greater can always be conceived; and "God" for philosophy cannot mean less than *id quo nihil majus cogitari potest.* Whether the Absolute can be called "good" in our sense of the word, which always implies comparison with a standard, has been doubted not only by philosophers but by some philosophical theologians also. But the Absolute must contain and surpass all that we know of as the highest goodness and the highest wisdom among mankind. (As Plato expresses it, the *ἰδέα τοῦ ἀγαθοῦ* is higher than righteousness.) The problem of evil seems indeed to be simplified, if we suppose a devil or a power of darkness struggling with the Lord of light; but it is the method of popular mythology to stave off difficulties by increasing the number of things to be explained. So far as we are justified in calling anything morally evil, we must be prepared to show that it is some element of weakness and incoherence, which tends to pass out of existence because it is not rational. But we call many things evil simply because they are inconvenient to ourselves: and yet some things very inconvenient to ourselves we discover to be inevitable and unalterable for us even by omnipotence, *e.g.*, the incommensurability of the diameter and the circumference of the circle or the impossibility of packing spheres as compactly as equal cubes. We all crave happiness and continuous happiness; but there

may be abstract possibilities which, in Leibniz's phrase, are not "compossible". What right have we to set up our longings as a measure of the universe? Least of all are those entitled to do so who have begun by disparaging the certainty of clear and distinct thinking. No theory may be attainable by us which is satisfactory to all our wishes; but we gain nothing by adopting theories that will not satisfy our intellect, for these will always provoke doubt. Irrationalism is at all times the parent of scepticism.

Whether the balance of pain or of pleasure preponderates in human life is an insoluble question, because pain and pleasure are not absolute quantities capable of statistical measurement, but relative to the judgment of particular individuals in particular moods. When people begin to reflect on this matter they generally adopt pessimistic conclusions, for reflexion about pleasure kills happiness. But that pessimism, genuine and earnest pessimism, can never be the living creed of any large portion of the human race is secured by natural selection. Sincere and convinced pessimists would kill themselves or cease to continue their accursed race. Nature has taken care that those shall prevail who are not indeed passively contented optimists, but who at the same time have sufficient interest in the struggle of life to keep toiling on, working out some purpose which, even in the clearest consciousness, is only faintly recognised.

It is perfectly true, as writers like Prof. James and Mr. Arthur Balfour are fond of reminding us, that mankind do not live by clear and distinct thinking but by faith. But it is the business of philosophy to discover what that faith is and not to accept the plain man's account of the matter without criticism; for the plain man's answer is not really the answer of the unsophisticated consciousness, which is blind and dumb, but the answer which has been put into his mouth by those who have brought him up. Now the faith by which we live and work and occasionally think—whatever other faith (*Aberglaube*) we may superadd—is faith in the rationality of the universe. And this faith means (1) that the world is an intelligible system, one and coherent, however little we may have discovered about it, and (2) that there is some meaning or purpose in it all, that it is not a world wholly or partially left over to chance or caprice. The rationality of the universe includes the presupposition, not merely that events are linked together as material and efficient causes, but that they can be understood (ideally or potentially) in the light of the formal and final cause. The sciences of nature have to do mainly with the former mode

of explanation, though their aim always is to reach formal causes (the laws of nature). But philosophy, which takes account of human life also, seeks for an explanation in terms of final cause, and even the sciences of organic nature, as Kant showed, have to use that conception at least as a methodological device.

In advocating the existence of an objective chance, Prof. James says that "our responsibility ends with the performance of [our] duty, and the burden of the rest we may lay on higher powers".[1] But can we do that unless we believe that the whole, including ourselves, is a rational system? If we believe in a real objective contingency, we are believing that there is a portion over which the higher powers have no control, and if we were really to believe that any demon or human scoundrel could actually and finally hinder the purpose of God, should we not have less heart for the fight, unless, indeed, we had such an inordinate "conceit of ourselves," as none of the world's best heroes have ever had, so as to fancy that we could do God's work independently of God's will? It may seem, perhaps, as if it made no practical difference to us whether what we find evil results from a rival power thwarting the benevolent ruler, or good principle in the universe, or from the necessary limitation of the temporal and spatial realisation of the Eternal Idea; but it makes a great difference for clearness of thinking: and even for practice it is surely better to feel that all is comprehended in a rational system, than that the fears of our discontent and despair are warranted by careful theory also. For if we believe that the highest being is not the Absolute, how do we know that he may not be defeated after all?

It may perhaps be answered that our philosophical faith is not in an actually existing rational system of things—experience prevents us believing in that—but in an end, a "final goal of ill" towards which evolution moves; that the conception of evolution involves the conception of the Absolute as Becoming, not as Being. The universe, it may be said, consists of a multiplicity of independent beings who gradually come to settle down into stable equilibrium—atoms or monads making as it were a permanent social contract with one another. The world then would be the "best of all possible worlds" in the sense that it is the arrangement best fitted to survive. Such a view undoubtedly agrees with much that is commonly said about evolution.

[1] *The Will to Believe, etc.*, pp. 174, 175.

But it raises all the old puzzles that Zeno found in the "many" or "becoming" when treated as absolute categories. Thus it makes time an absolute and brings in the difficulties about a real beginning and end of time. Process and change cannot be thought out, unless in reference to a permanent and unchanging "substance". "It is only the permanent that can change," as Kant said. Heracleitus himself, the philosopher of the universal flux, had his "fire ever-living, thinking" as the one principle pervading all things: and it was only his sophistical successors who tried to work with the concept of absolute change and who found themselves logically compelled to give up saying anything at all. Our popular "Sophists" of the present day talk of "Evolution evolving" and of the "developmental process" as if it were an absolute. But it is only the carelessness of popular language and the use of abstract nouns as subjects which allow such phrases to pass current. Evolution is the appearance or manifestation to us of a timeless reality which includes and transcends change.

> Our Playwright may show
> In some fifth act what this wild drama means.

Even the image or picture in these lines of Tennyson's helps to lead one into a more philosophical conception of the world, than the belief in Evolution as the absolute. The Playwright may show us his meaning only at the end of a long process, but if he is a perfect playwright, his thought, though only bit by bit revealed to us, pervades the whole of his work.

II.—FEELING AND THOUGHT.[1]

By Alexander F. Shand.

I.—The Ambiguity of 'Feeling'.

The problem of psychology in dealing with its complex subject-matter is, "first, to ascertain its constituent elements".[2] This fundamental problem has been discussed times without number and the conclusions reached are on the whole unanimous. Psychologists are generally agreed that Feeling, Thought and Conation are the universal and therefore inseparable constituents of all mental states. But they do not always attach the same meaning to the terms; and it has been noticed that this ambiguity is especially prominent in the case of the first term, Feeling. Some authorities attempt to confine it to the expression of pleasure and pain. Others use it with a more extended significance to include indifferent feelings neither pleasurable nor painful, such as a neutral excitement would be supposing it were a fact. Others urge that Feeling must at least include the common element of pleasure and pain, an element that it seems can be neither one nor the other.

In the last place, Feeling is used in a sense which the experiences of pleasure and pain, the emotions, passions and sentiments have played no part in determining; but the common meaning of the verb 'to feel' has supplanted the influence of the class that we name 'The feelings'. We feel warm or cold. We feel the rapid movement of thought or its sluggish state; we feel the vigour of our resolutions, the eagerness of our desires, and also our weakness and inconstancy. In this sense, Feeling is taken as the equivalent of "immediate experience,"[3] of "sentience or anoetic consciousness,"[4] of the mere fact of "presentation" in distinction from "discursive thought" which identifies the character of this feeling or presentation and refers it

[1] Read before the Aristotelian Society.

[2] Prof. Ward, "Psychological Principles," Mind, viii., p. 465.

[3] F. H. Bradley, Mind, N.S., vol. ii., p. 212.

[4] G. F. Stout, *Analytic Psychology*, vol. i., p. 50.

to an object. And so the special sensations have to be regarded as varieties of this Feeling, those varieties not interpreted by thought to be subjective, but on the contrary referred to external objects. It is at this point in the logical extension of the term, as the equivalent of immediate experience, to include the special sensations as also immediately experienced, that the technical and popular meanings divide. For in the ordinary use of the verb there is a markedly subjective reference. We do not 'feel' a colour or a sound. Our sensations are objective; our feelings subjective; but, in this technical sense, Feeling is simply experience, and its objective or subjective reference an affair of thought extraneous to it. But, here as elsewhere, the popular use is not consistent. People say, 'I felt you were there before I saw you,' or that they "feel" the presence of their dead for some time after their departure from this life. This feeling is not the objective experience it is taken to be, unless there be a spiritual or telepathic sense; but it is something so like the immediacy and convincingness of sensation that no other term so well expresses the meaning.

While in the popular meaning of the verb 'to feel' direct or immediate experience is a prominent constituent, thought is not excluded. It is merely less prominent, and to feel in the popular sense is to think, and to identify however vaguely what we are feeling. Sometimes it is a process of thought we identify, or a resolution, or a doubt, or warmth, or a spirit-presence. But, in the technical meaning of the term, we seek to exclude this second constituent 'thought' and confine the term to the single constituent 'feeling'. Thus 'thought' and 'feeling' in this strict sense are mutually exclusive in their meaning, though in the actual psychoses the two constituents which they signify may be inseparable and complementary.

Feeling, then, as immediate experience is not what is meant when we speak of 'The feelings'. What these suggest to the mind, what is found under this heading in text-books of psychology, is the class formed of the emotions, passions and sentiments, and all varieties of pleasure and pain. But organic sensations are sometimes included in this class, partly because of their close connexion with pleasure and pain, partly because of their subjective character; for through an insufficient analysis no consistent use of the term is reached. "Pleasure-pain" is not essential to this class if there be neutral feelings; but in common cases and in the common meaning it is the prominent feature.

II.—The Antithesis of Thought and Feeling.

While "immediate experience" is not what is meant by the fundamental class of the feelings, feeling as immediate experience may also claim to have a fundamental character. If it does not form an ultimate class of mental facts, it is held to enter all of them as an ultimate constituent. What is the character of this constituent? Can we analyse it? Can we define it? What is ultimate we cannot in the strict sense define: but we can reach the same end and in a broad sense define it by contrast. We can hardly think of Feeling without recalling to mind its contrary. For it suggests the antithesis of thought; and the character of each becomes clear and definite in contrast with the other.

Thought in a broad sense is defined as consisting in "objective reference". Feeling is distinguished from it "because it involves no objective reference".[1] It has been noticed that, as far back as Reid, we have a clear expression of this negative character of feeling. "There is no difference," he says, "between sensation and the feeling of it—they are one and the same thing."[2] Again, he says, in sensation as distinguished from perception, that is to say, in 'feeling' in the present sense of the word, "there is no object distinct from that act of the mind by which it is felt".[3] And Mr. Bradley expresses the same conclusion: In feeling, there is not "anything like a subject and object".[4] The "objective reference" of thought, in contrast, is the reference of this very feeling or presentation to an object. What is this object? Is it some other feeling or presentation? The answer that has come down to us from Kant is that it cannot be. The object that we mean and intend "cannot be a modification of our own consciousness at the time we mean or intend it".[5] We may put the conclusion in another way. Of the two universal constituents of "noetic" consciousness, feeling and thought, the one is not, and as immediate experience cannot be, the object of the other. At first sight, this theory may seem to deny the palpable fact that we often make our present feeling the object of our present thought. But this apparent contradiction illustrates an inconvenient use of the term 'object' rather than a denial of this fact. The present

[1] *Analytic Psychology*, G. F. Stout, vol. i., p. 41.

[2] Reid's *Works*, Hamilton's edition, vol. i., p. 310. Quoted by Mr. Stout, *op cit.*, p. 51.

[3] *Works*, p. 310. [4] Mind, xii., p. 365. [5] G. F. Stout, *op. cit.*, p. 46.

sensation or feeling about which our thought turns is not called 'object'; but the objective reference precisely consists in the turning of thought about this feeling. In this reference, thought inevitably transcends feeling and invests it "with attributes and relations which are not themselves immediately experienced at the moment".[1] If we choose to call our present feeling, when we think about it, the object of our thought,—which from the logical point of view is called the subject of the proposition we are in process of forming,—it follows none the less that in order to think about this present feeling we must transcend it and refer it to something beyond itself. We identify a present sensation as of some colour or of some shape; and this is a reference to other objects with which it has points in common. These may have been experienced in the past: they are not experienced at the moment.

III.—The Relation of Thought to Feeling.

To identify a present sensation we must discriminate it from its context. "All processes of thought are *eo ipso* processes of discrimination."[2] The feeling or sensation must lend itself to our discrimination. We cannot by sight discriminate objects in the dark, and, being unable to discriminate, cannot identify them. A sensation must present a sufficient difference from its context for us to be able to discriminate it. And in discriminating, as in identifying, our thought transcends the sensation. But the thought-reference is different in the two cases. In discrimination it suffices for thought to refer to the context of the sensation, which like it is immediately presented, and to distinguish the sensation from this context.

Thus "thought is discriminative only so far as it has presentation for its vehicle,"[3] and so far as this presentation is sufficiently differentiated. This is true whether we are or are not thinking of our sensations. In perception we may be thinking of external objects; but it is through our visual, tactile and auditory sensations that we are able to perceive them. However objective our thought, however much removed from the attitude of the psychologist or painter, we still in some measure discriminate and identify these sensations. We merely do not regard them as our sensations. We take them to be the colours and shapes of external things, and the sounds which they produce, and the solid resistance which they offer to us. It is only the changes which the object

[1] G. F. Stout, *op. cit.*, p. 44. [2] *Ibid.* [3] *Ibid.*

undergoes according to our position and distance from it that we frankly acknowledge to be subjective. But from the psychological point of view we must reclaim from the external object, not merely these its changing appearances, but its colour and shape, and all that we directly experience in it, as indubitably our sensations. And in all perception we are constantly discriminating some sensations, though we neglect the changes of visual magnitude. We identify the kind of object we perceive through identifying the sensation of its shape or colour, or the sensations of its movement. Through this constant dealing of thought with what is presented to it or directly experienced, we are able to think of other qualities which are not presented, and to form an accurate judgment of what the thing is. It is probable that the farther we went back in the mental history of the race or the individual the more should we find thought in perception engrossed with its immediate experience, though it would still less than in the present identify this experience as its own feeling. With a weaker and less independent thought, with a thought bound to sensation and sensation itself a recent acquisition, the less could we fill out the sensory presentation with the qualities which a richer experience discovers to us. The very tables and chairs which give us so many changing appearances according to our position, which we have connected with such different uses, to the infant must be much less complex unities. The mere sensations must engross him, and only the bright and intense among them, or those to which his attention is directed through hereditary bias, or those which move rapidly through the visual field. It is to these sensations that what little thought he has is directed. It is these immediate experiences which he discriminates and identifies.

IV.—The Feeling-Continuum.

If we study the field of vision we do not find any absolute breaks in it. Its dividing lines and its blanks, its empty and its filled appearance, are still nothing but visual sensation. It is a genuine *continuum*. And our organic sensations have also this character of a mass in which we can neither find a breach nor make one. Both are *continua:* but the break which cannot occur within the limits of each is found between them. There is no greater gulf in nature than this between the field of vision, which our uncritical thought interprets as objective and independent of us, and the mass of organic sensa-

tion which we think of as wholly subjective, as exclusively our own property. But apart from the opposite interpretation which our thought places upon these distinct masses of sensation, in themselves as mere experiences or feelings they present the deepest contrast. The colours and gradation of light and shadow of the field of vision wholly disappear as we enter the mass of organic sensation, and as we depart from it we lose its specific character penetrated with varying degrees of warmth, and can find no trace of it in visual sensation. When we pass to auditory sensation we come upon another of those deep gulfs in our experience, whether we approach it from the side of organic, or from that of visual sensation; and we have this difficulty in dealing with it. Are the sounds we hear detached existences forming no *continuum*, discrete sensations with real gaps between them, or is there an auditory as there is a visual *continuum?* Do these sensations of sound float like colours in a medium of their own? Do they float in the silence and contrast with it? And as there is a field of vision, ever present, from which in the darkness all colour passes, is there something like a field of silence into which sounds break and which persists when these pass from it? "Into the awareness of the thunder . . ." says Prof. James, "the awareness of the previous silence creeps and continues; for what we hear when the thunder crashes is not thunder *pure*, but thunder-breaking-upon-silence-and-contrasting-with-it."[1] And so the silence creeps into the thunder and continues through the succession of sounds as their true bond of continuity, not merely in their succession and between their pauses, but each isolated sound contrasts with the silence around it. On this view, silence is no more a mere negation than is darkness. It is a positive sensation. And between the degrees of sound and silence, as between the degrees of darkness and light, there is a character which both have in common, though in degree unequally distributed.

If the human mind is possessed of at least three *continua*, what is the relation between them? Are they just masses of sensation continuous in themselves but with no bond of connexion between them, or where the specific character of each vanishes at the limits of each, is there a deeper character hidden in the gulf between them? Throughout the darkness and the light, the sound and silence, the mass of organic sensation, and within their deepest con-

[1] *Op. cit.*, vol. i., p. 240.

trasts there is the all-pervasive character of "presentation" of "immediate experience," of feeling. Within us is "a continuous mass of presentation in which the separation of a single element from all context is never observed".[1]

Feeling is then a *continuum* which contains *continua*, and these *continua* in relation to one another are discrete masses in respect of the specific character of each, but, in respect of that universal character they share, they form one *continuum*. But is feeling continuous with itself through the succession of time? Is it never broken in the life-history of the individual? This is a question we might answer if we could observe ourselves in states of sleep and so-called unconsciousness. But as in such states thought is either interrupted or incapable of voluntary attention, so through its absence or inefficiency we cannot verify the continued existence of feeling. We may find ground for assuming this as a working hypothesis, as the physicist assumes the continued existence of matter. This is the utmost we can expect. But whatever be our attitude to this question feeling as interpreted by psychological analysis, as statically considered, is a *continuum*: and it is continuous through the stream of change, so far as we can directly observe it.

What is the relation of this feeling-*continuum* to the thinking of which it is the vehicle? Do they together form one *continuum?* Can thought itself possibly be feeling? If not we seem face to face with a psychological dualism as absolute as the dualism of scholastic theology.

From another point of view the relation is a perplexing one. Are all the feelings actually present in the mind identified and discriminated by thought? Do their differences precede our discrimination of them; do they come into existence at the moment of our discrimination; or are these differences and our discrimination different names for one and the same fact?

V.—The Hypothesis of the Relative Priority of Feeling.

"It is easy to show," says Mr. Stout, "that there is by no means a complete coincidence between the existence of presentations and their significance for thought. . . . At this moment I am thinking about psychological topics. I receive at the same time a multitude of diversified impressions from surrounding things which certainly enter

[1] F. H. Bradley, Mind, xii., p. 357.

into my total experience. But if I refer them to an object at all I do so in a very indeterminate way. My thought discrimination is very far from keeping pace with the differentiations of the sensory data as immediately experienced."[1] But where is our evidence for concluding that, beside what we do discriminate in a total experience, there are other differences contained in it which we do not discriminate? We have a direct knowledge only of those differences which we do discriminate. The other differences supposing them to exist are experienced, but not known: how then can we know them to exist? For feeling gives no information about itself. It is blind, and like everything else in the world can only be interpreted by thought.

It is generally held by psychologists that attention is a selective process and that, outside its narrow area, there is a wider area of inattention. The moment we attempt to make a direct assertion about any item within this wider area, we are met by the objection that, in the process of making it, we have brought this item within the area of attention. The only method we have for reaching any conclusion about this wider field or even for justifying our assertion as to its existence is to deal with it through memory. As any psychosis is passing away and giving place to a new one in its stead, we must ask what there was in the former over and above the clear attentive thought which we can recall. But over and above this clear thought which we can recall, there is nothing more than a vague and untrustworthy memory. While occupied in our work we may remember hearing some one put coals on the fire or the rattling of a cart by the house. But it is doubtful whether these obtrusive events were in the field of inattention. It is more probable that they momentarily deflected attention to themselves.—If we have this difficulty in demonstrating anything of the field of inattention, to which there is often supposed to be some vague thought present, how much greater must be our difficulty when we attempt to demonstrate the existence of differences not in any degree thought of or discriminated!

There is then no direct evidence for asserting the existence of anything in consciousness not in some degree discriminated or thought of. What indirect evidence can we find? There must be something to account for the belief of men in more in their minds than they can discriminate. When we momentarily attend to some organic sensation, we believe

[1] *Op. cit.*, vol. i., p. 48.

that it preceded our discrimination. And in this way we come to believe in the field of inattention. We make momentary excursions outside of the ordinary objects of attention to objects that we do not commonly notice—the rumble in the street, the ticking of the clock, the pressure of the seat on which we are sitting, the vague visual sensations outside the focus of vision, the mass of organic sensation; and we infer that whatever among these various sensations seems constant, and not due to a present change in our environment, preceded that moment's thought which revealed them to us, and will continue in the future as in the past independent of it. For if these apparently constant facts do not precede our momentary thought of them, we seem driven to the conclusion that the thought which discovered created them. And we know that our thought cannot create them. We cannot make what differences we please. Our judgments of subjective facts are no more capricious than our judgment of objective facts. The sensations we discriminate "determine our judgment": they "are not created by it".[1]—That something determines such judgments is indubitable; can we infer that they are determined by feeling as relatively prior to and independent of the thought which thinks it?

VI.—The Exclusively Physiological Hypothesis.

There "are not three things in question—conscious processes, unconscious mental processes, and merely physical brain-changes, but only two, on the one hand conscious processes and on the other hand nervous processes without consciousness . . . ".[2] In every state of noetic consciousness there are thought and feeling and there is precisely that amount of feeling which is discriminated or thought of. There is no more. There is no unconscious feeling such as seems to precede our clear discrimination. There is no feeling present that we do not consciously discriminate. The moment before we discriminated this feeling it was non-existent; and that which constrained our thought, so that we had no choice but to discriminate this feeling, was the brain-change which caused it. This is the second hypothesis we may adopt for interpreting the facts of our mental life and the conviction that the thought which discriminates cannot create these facts. Like the first, it may

[1] G. F. Stout, *op. cit.*, vol. i., p. 49.
[2] W. McDougall, Mind, N.S., vol. vii., p. 20.

assume a confident air as if it rested on direct evidence; but neither is better than a hypothesis. We cannot prove by observation the existence of feelings in the mind undiscriminated nor their non-existence. This physiological hypothesis is narrower and more dogmatic than the first. The first is ready to admit that for every undiscriminated feeling there corresponds some brain-state. The second denies the undiscriminated feeling and posits the solitary existence of the brain-state. It is more the hypothesis of a physiologist than of a psychologist. In psychology as in physiology, we try to interpret the facts in accordance with the terms of our science. But this hypothesis excludes a psychological interpretation of the facts: not on the ground that a psychological interpretation cannot be furnished, but on the ground that a physiological interpretation can be. But we have the right and duty to give a psychological explanation of the facts wherever we can; and neither science has the right to exclude the complementary explanation which the sister-science from its standpoint legitimately furnishes.

On this hypothesis every mental process or factor of a mental process that we identify and discriminate by thought comes into existence at the precise moment of this thought-discovery, and endures only so long as it remains thought of. When some movement takes place on the margin of the visual field and we turn our eyes in the direction of the movement and accommodate them for the object, we know that this physiological process does condition the uprising of a number of sensation-differences which before were non-existent. The indefinite shape of the object gives place to a definite shape: a number of details appear which were not present in the confused state of the sensation. Why should this not be the rule in all cases, and the movement of attention be accompanied by a physiological process which creates the mental fact at the moment we attend to it? But we can discriminate the cases in which the mental event is almost synchronous with our discrimination from those cases in which it appears to have preceded it by an indefinite time. New sensations are constantly thrust upon us; and we identify them as new events. Their character may be old and familiar, but their occurrence is fresh. Other facts in our experience we identify as old and not new occurrences. They do not come with any shock of surprise to us. "Does not every sudden shock, appearance of a new object, or change in a sensation create a real interruption, sensibly

felt as such?"[1] The continuity of our lives is not broken by such new events, but we sensibly feel the shock of them.

In cases of lingering illness and where a pain of low intensity is an almost constant accompaniment, the sufferer will say that he is able to forget it at times, using the word 'forget' in reference, not to past feelings of pain which he no longer remembers, but to present feelings of pain which he ceases to discriminate. "It is always there," he will say, "but at times I forget it." The physiological hypothesis can offer no interpretation of this experience. On its assumption we must maintain that pain as a present fact was not for a moment forgotten, and that when it was forgotten, it had ceased to exist. And it can offer no interpretation of the distinction we constantly draw between mental events which we identify as new occurrences and those which seem either to be constant factors in our experience or at least to have been some time present in it. How is it that all mental events, at the moment we discriminate them, do not strike us as new and equally new occurrences, if a moment before they were mere brain-states? How is it that while we treat some of them as old events, we treat our recollection of them as a new event? What is the meaning of this delicate distinction which popular thought, not given to subtlety, yet habitually draws? As with a fresh throb in the intensity of pain the sufferer is recalled to his suffering, he exclaims: "Ah! this terrible pain, will it let me forget it for so short a time?" The pain is worse. Its higher intensity is a new change in its process, which provokes anew his recollection of it. The feeling of the pain he identifies apart from its changed degree as old, but his recollection of it as a new event. He was mistaken, he should have said that it was all new, equally new as a mental occurrence, the feeling and his recollection of it. He should have said what he sometimes says, though significantly not always: "Ah! this terrible pain has come back, will it leave me for so short a time?" There ought to be no discrimination between the two cases, and the existence of this discrimination as a fact is that which the present hypothesis is unable to explain.

This example of painful experience is no exceptional case. What is true of it applies also to our discrimination of organic feelings, marginal imagery, and in general all factors in our experience which are normally too vague and too unimportant to attract our attention. When we discriminate them, we are aware that they are old factors in our experi-

[1] Prof. James, *op. cit.*, vol. i., p. 166.

ence. Our discrimination alone feels like a new occurrence; whence we infer that they were prior to our discovery. The premises of this inference are not unexceptionable evidence. It is easy to object to them; but it is well to remember that every distinction we draw within our experience between what is constant and changing in it, between what is old and new in it as an event, is substantially of the same character.

VII.—The Hypothesis that Feelings which appear Undiscriminated are Vaguely Discriminated.

Feelings which appear to precede our discrimination of them, so far as they do precede it are not reduced to mere brain-states, nor are they "anoetic" feelings, they are discriminated, but thought of so rapidly, so vaguely, so inattentively, that no memory of them remains.[1] This is the third hypothesis. Because of this rapid and complete forgetfulness we must not infer that these differences are undiscriminated; but the argument is double-edged and gives us no warrant for concluding that they are discriminated. It is, then, like the others, a mere hypothesis of what does or does not take place in processes inaccessible to direct observation. There are two prominent conceptions in this hypothesis: the one is of vague, rapid and inattentive thought; the other, of rapid forgetfulness. Dreams furnish us with familiar examples of this kind of thought, so vague, so rapid, that as soon as we wake we find ourselves unable to recall them. Yet the very effort shows that our forgetfulness is not complete. We remember that we have dreamt, that we have been consciously aware of some train of images, though what these images were or what was our thought-attitude to them, we cannot remember. But on our present theory if these images had persisted they would, as long as they persisted, have been the vehicle of the conscious thought which discriminated all that was present in them. No memory would be required to assure us of the presence of this thought: no forgetfulness could overtake it, so long as it remained present. Thus "our own bodily position, attitude, condition, is one of the things of which *some* awareness, however inattentive, invariably accompanies the knowledge of whatever else we know".[2] For the presence

[1] Compare James, *op. cit.*, vol. i., p. 165.

[2] Prof. James, *op. cit.*, vol. i., p. 241.

of this awareness we have not to rely upon an act of memory. We have only then to observe the fact and verify its existence. But it is precisely due to the fact that we cannot verify its existence that we owe the construction of the present hypotheses. We are not consciously aware at every moment of our thought-life of all our organic sensations and all their differences and all the changes they undergo,—still less of the subtle differences and momentary changes of the thought itself. We are only aware of some of these sensations and some of their differences and some of the changes they undergo, sometimes, when pain, pleasure, emotion or psychological experiment recalls us to their presence. But it is all of them of which on the present hypothesis we must be conscious.

Like the second hypothesis this one must also deny the spontaneous testimony which ordinary people give as to the forgetfulness of pain. We think, when the pain is of a low intensity and the attention becomes absorbed in a pursuit disconnected with it, that, during shorter or longer intervals, we may completely forget the presence of pain. This we must put down as an illusion of memory. At the moment at which we "recollect" the presence of pain, we are only clearly aware of what we were vaguely aware the preceding moment. The inattentive process of thought has simply passed into an attentive process. We then neither forget the presence of pain, nor is our recollection of it a new event. But our spontaneous judgment on the contrary is that we do forget the presence of pain, and that our recollection of it is a new event. The hypothesis contradicts and cannot interpret this spontaneous judgment. The judgment may be false; but we cannot get closer to the facts than its indirect assertion of them. But do we distrust this judgment because some other spontaneous judgment contradicts it? No: this judgment is contradicted by a mere hypothesis whose function properly understood is to interpret, not to contradict it. So we fail on this hypothesis to interpret the distinction we draw between the pain as an old event and the recollection of it as a new event. If both are of the same age and have the same life, why do we not identify both as old events or both as new events? The ordinary man believes that he can distinguish between the shock of a new event and the mere continuing in the mind of a former experience. This distinction we must assure him is not to be trusted, inasmuch as it leads him to identify a present feeling as old and his identification of it as new, and

through these fallacious premises to impose on the logical mind the false conclusion, that this feeling prior to his identification was an "anoetic" experience, and, in the ordinary sense of the term, an unconscious feeling.

VIII.—The Meaning of Vague Thought.

When we say that we have a vague thought of something, we mean that our thought is inadequate to its object. Whether the object of our thought be enveloped in a physical or moral darkness, there we can but vaguely discriminate it or identify its character. We know that there is more detail in the object than we discriminate, and that our identification of its character is abstract and incomplete. And it is due to this inadequacy of our thought to its object that we call our thought vague. It is not due to the character of its object. The imagery on the margins of the visual field is at its maximum of vagueness; but it does not follow that our thought of it is vague. If our attitude is 'objective,' if we are trying to guess what the object so vaguely presented to us really is, our thought of this object may be most vague, hesitating and inadequate. If our attitude is psychological and subjective; if we make the visual imagery itself our object, and have an adequate thought of its vague character, its indefinite colours, its misty outlines, it would be a misuse of words to call our thought vague. On the contrary, we have the clearest thought of the peculiarities and character of this marginal imagery, because we have an adequate thought of it.

If we then have so often a vague thought of what is taking place in our minds, if the rapid change and the delicate differences of the thought-process within us, and the less intense and vaguer sensations, almost wholly escape us, our thought is vague because it is inadequate to its object, because there is so much more in the psychosis of the moment than it discriminates. Is this the vague thought which the third hypothesis conceives as lying outside the attentive process, and accompanying all the experiences which are not in the focus of attention?—then this hypothesis is suicidal. In analysing its conception, which it has so inadequately understood, we have transformed it into the conception of the first hypothesis.—There is more detail in our experience than we succeed in discriminating. We are converted to the hypothesis of the relative priority of feeling.

But if we maintain our third hypothesis, we must be able

to give some other interpretation of the vague inattentive thought, so rapidly forgotten, which is its central conception.

Our thought is sometimes vague and confused, especially where it is dealing with a new and difficult subject. But to any man who loves clear thinking these states of confusion are painful and oppressive. They are not like the vague thought of this hypothesis rapidly forgotten, like many painful experiences they carry a good memory. Some, on the contrary, are not pained by vague thought, it pleases them and they live contentedly in it. They have a partiality for difficult subjects, and especially for metaphysical speculations, which appeal to their love of mystery. When they speak you recognise that their thoughts have no definiteness in themselves, and no coherence among each other, converge to no conclusion, and might without injury be arranged any way you please. But their thinking, such as it is, occurs in an attentive process, and cannot be that inattentive thought which the hypothesis has in mind. As an attentive process, clearness of some kind is essential to it;[1] and they are clearly aware of the darkness and mystery of the subject which fascinates them. Their love of mystery tends to foster it. The sentiment of mystery conquers the love of truth. They preserve the obscurity of their subject, in order to be clearly aware of its mystery. This thinking is only vague so far as its object is taken to be that adequate knowledge in relation to which its present thinking is vague because inadequate; but it is clear so far as its object is that sensible mystery directly present to it which it broods over and fosters. But this attentive process, and this thought essentially clear in relation to the object of that process, this thought which carries a good memory, cannot be the vague, inattentive thought, rapidly forgotten, which this hypothesis has in mind.

Is such a thought anywhere a fact within us, a thought vague, inattentive, rapidly forgotten, which yet adequately discriminates all present experience in the mind? Let us assume it to be a fact. Then all changes and gradations in the mass of feeling, are adequately discriminated, so that nothing present escapes. But in logically developing this conception of the hypothesis, the vague thought which it posits outside the area of attention has been transformed into the clearest thought we can possibly have. For if all gradations in the mass of organic feeling with all its vague

[1] "An Analysis of Attention," MIND, N.S., vol. iii.

differences are discriminated, with the varying warmth that pervades it, with the pressure of objects on different parts of the body which almost melts into it, with the pleasurable or painful tone which penetrates its parts,—as that the head aches while the feet on the fender feel warm and comfortable,—if all these differences are accurately and fully discriminated, then we have that clear and adequate awareness in the inattentive process which it is our ideal to reach in the attentive process, to which we there make some approximation. In logically developing the hypothesis on this side of its conception we have transformed its inattentive process into an ideal process of attention.

IX.—The Identity-Hypothesis.

Feeling and the conscious awareness of it, the difference between feelings and their discrimination in thought, are numerically one and qualitatively the same. Language here as elsewhere leads us into error. We have distinct ways of expressing the same mental fact, one passive, the other active. We speak of presented difference and our discrimination of it, of sensations and our consciousness of them; and it is almost impossible to escape from the illusion which this habit of language fosters. We regard it as indisputable that thought and immediate experience are distinct mental constituents. We introduce a sophistical dualism in the mind.

This identity-hypothesis would hardly obtain a hearing if it maintained the absolute identity of thought and immediate experience. A restricted interpretation of it alone concerns us. Where "we look before and after," there presentation and thought are not the same: where and so far as we deal with presented experience, the presented experience is all. There is no second element, no awareness of it. It is the awareness. Thought only begins where this awareness, this presentation ceases.

On this hypothesis we cannot maintain that our "thought-discrimination is very far from keeping pace with the differentiation of the sensory data as immediately experienced". Whatever difference exists in the mind that must be discriminated. We must be consciously aware of this difference. The difference and our awareness of it are the same.

There is one fundamental fact which all of these hypotheses have to interpret. In all perception, and in every judgment about our sensations, we must recognise, if we think of it,

that our thought is constrained, that it cannot make the fact. This presented difference between two colour-sensations in the centre of the field constrains me to accept it as the difference between blue and green. I cannot make it other than I find it. When we pass to other mental facts the amount of the constraint may be sensibly diminished. I can make them other than I find them ; but I try not to. The delicate, quickly changing process of thought, upon that I can foist almost any interpretation. Its differences may not be as my discrimination of them. They may pass undetected. I may discriminate where there is no difference. Still here too there is something of constraint, some touchstone of the truth and adequacy of our discrimination ; and the greatest psychologist in this respect is he who is most sensitive to it.

In all this, an open mind must surmise some dualism of elements, functions, aspects or whatever you please to name them. But this hypothesis, as it rejects the dualism, finds itself in the same straits with the physiological hypothesis which likewise denies the existence of any undiscriminated mental factors—of any factor of which we are not, in the ordinary sense, conscious. Hence, like this hypothesis, it cannot interpret, it can only deny those spontaneous judgments of ordinary thought that pain and other experiences, while they still subsist in the mind, may be forgotten, that as we recollect them we can distinguish our recollection of them as a new event from their existence as of relatively longer standing ; [1] that the common mind has grown sensitive to a difference in its experiences and that common thought submits to this constraint and interprets it,—the difference between persistent factors in its experience which it habitually forgets, like organic sensation, and the irruption into experience of something new as event, however familiar in character.

There is an experiment in attention which should convince us of the essential duality of feeling-difference and thought-discrimination. While the eyes remain accommodated for one object, we direct attention to the marginal images on the right or left of the field. Through this transference of attention we become clearly conscious of the vague difference between these marginal sensations with their misty outlines, while we become less clearly conscious of the clear differences in the centre. Before the experiment we may be as unaware of marginal as of organic sensations.

[1] See *ante*, p. 487.

Suppose even that we are vaguely aware of them with all their differences, still how great a change between the obscure awareness and the clear awareness of these sensations! The clearness of the sensations and that of our awareness of them do not correspond, hence they cannot be the same: and the essential duality of these elements we bear witness to whenever we speak of the *movement* of attention over the visual field while that field itself remains constant.

X.—The Hypothesis of Double Consciousness.

The experiments to which many hysterical patients have been subjected have brought to our notice facts of which the hypothesis of double consciousness is given as the explanation. Each consciousness may develop a distinctive character of its own. And these personalities do not appear always to be successive, if the facts be rightly interpreted, they are sometimes co-existent.[1] While the first consciousness maintains a conversation with one individual, the second self writes intelligent answers to questions which another individual whispers from behind, and performs acts which are held to involve intelligence. This secondary self, according to this interpretation, cannot be anoetic. It is more than a separated tract of sentience. It has its centre of thought and attention distinct from the thought and attention of the primary self. In any normal individual an attempt to carry on two simultaneous operations both requiring selective attention for their performance would lead to an interruption of one or the other, and an oscillation of attention between them. In some hysterical women this does not seem to be the case.

This hypothesis of Double-Consciousness in its restricted application is not an alternative to the hypothesis of the Relative Priority of Feeling. For as there is much detail of sensation which the primary self, at any given moment, fails to discriminate, so it is reasonable to suppose that the secondary self, attentive to the commands or questions of the operator, overlooks, like the primary self, such irrelevant details. Before the one hypothesis can be set up in opposition to the other, we must broaden and develop it so that (1) every one must be held to possess a secondary consciousness

[1] This is still in dispute. See *L'Automatisme Psychologique*, Pierre Janet, 2me partie, ii.; *Les Alterations de la Personalité*, A. Binet, 2me partie; *Subliminal Self or Unconscious Cerebration*, by F. Podmore, *Proceedings of Psy. Soc.*, vol. xi., part xxviii., p. 325.

co-existing with the primary, that (2) discriminates all the detail of immediate experience which the primary fails to discriminate, that (3) never relapses into mere sentience, as the first appears to do in deep sleep, in cataleptic trance, in fainting and anæsthesia. That a secondary consciousness exists in each of us possessed of this marvellous talent of subjective observation is a hypothesis which no known facts justify and which has never been advanced by any scientific intelligence.

In judging between these different hypotheses, in deciding which of them we should adopt for interpreting this enigmatical side of our mental life, we have a clear principle to guide us. We have to select that hypothesis which faithfully interprets the facts, without having to deny or distort them. Mental facts as a rule are not "stubborn things". They are as delicate as the wings of an insect, and must be as delicately handled. We have only found one hypothesis which is in harmony with this principle—the hypothesis that feeling, so far as each individual feeling is concerned, is prior to and independent of the thought which discriminates it. In every consciousness thought may be present to feeling, and the two constituents complementary and inseparable; but thought is not present to every feeling, nor to every difference between feelings.

XI.—Feeling as a Continuum Containing Relations.

As our "thought-discrimination is very far from keeping pace with the differentiation of the sensory data as immediately experienced," so we fail to identify the common characters which pervade these same sensory data. Like their differences, we are convinced our thought discovers, but does not create, the common characters of feeling,—the warmth which commonly pervades all but the outlying parts of organic sensation, its faintly pleasant or painful tone, the quality of the sounds which meet our ears from the crowded street, the heavy rumble of the omnibus, the groaning and creaking of brewers' drays, the quick rattle of the cabs, and under present conditions of light and atmosphere, the actual colour of our visual sensations. And not only does our thought not create these several qualities of sensation, but it is not synchronous with them. A moment before our identification they were not, any more than the undetected differences, mere brain-states. They exist in the sensations though our thought-reference be absent. While we identify some other class-character,

they await our later identification; and our whole life may pass without discerning them. And in thought itself while it exists in constant change, how many of its fleeting and subtle characters do we detect? Do we detect the changes in a question as it passes through doubt into the answering judgment? Do we detect at each moment the change of the judgment, its problematic, hypothetical and disjunctive phases? There is a wealth of common characters in the mind which, at any given moment, we fail to identify.

It is a curious fact that those psychologists who have been foremost in the enunciation of feeling as at least relatively prior to thought, have either been silent concerning the presence of relations in feeling or have explicitly denied them. Thus Mr. Bradley says there are "no relations and no feelings, only feeling. It is all one blur with differences, that work and that are felt, but are not discriminated."[1] But if the differences persist in it undiscriminated, why should not the relations involved in them, in their co-existence, in their change, and in the fact that these differences "work" and have a tendency, and the relations involved in their common character of feeling, why should not all these relations be independent of our thought of them?

The atomistic psychology of Hume and the Mills produced two contrary explanations of the unity of the mental life, one of its own and known as the laws of association, the other produced by its German adherents. Those who were deceived by the metaphorical language of Kant posited a mysterious activity in the mind, the pure Ego, whose function it was to produce unity where without there would be only a discrete manifold. Hence the phrase, the "relating activity" of the Ego, and the belief that all relations of the sense-manifold were due to this activity. But with altered premises comes a changed conclusion. "There is no manifold of co-existing ideas: the notion of such a thing is a chimera."[2] The most rudimentary mind is a *continuum* and not a discrete manifold of sensations; and this mysterious activity is no longer required to unite what is already united.

XII.—Thought-Reference as Exercised within the Limits of Immediate Experience.

A *continuum* of feeling filled with difference and other relations, pervaded by common and distinctive characters,

[1] Mind, xii., p. 363. [2] James, *Principles of Psychology*, vol. i., p. 278.

will suggest to us the possibility that thought may sometimes find exercise for itself within this complex unity. What will thought gain by its more ambitious and developed attitude? It will but have a wider range of objects from which to select, a greater multitude of distinguishable characteristics, a fuller insight into the conditions on which events depend, a more complex attitude, and the thought of an infinite whole which embraces all realities. That in adult life we do apparently transcend the whole of immediate experience, that in thought, desire and volition we think of objects and ends which are not existent facts in present experience, is certain: that the most rudimentary thought formed in the infant or animal mind assumes at the outset this attitude, is doubtful. And our doubt will be increased if we can show that, in the mass of feeling and the sensations of the special senses, there is present to thought all the material which it requires for the adoption of its simplest thought-attitude. For this mass of feeling is not a statical *continuum*, but a process of change continuous with itself through successive moments. The limitation of thought to immediate experience does not confine it to any mathematical point of time within which its reference would be impossible. The psychological present contains a genuine portion of the stream of change. And in this psychological present are differences and vague changes which we recognise that we fail to overtake in thought. The effort to discriminate them will then be an exercise of thought within the limits of immediate experience.

But can thought be confined to discrimination alone, must we not also identify in some degree, in the simplest way, the sense-material discriminated? And wherever we identify the character of an experience, we inevitably transcend it. For its character is something universal which cannot in thought be confined to it, which obliges us to refer to objects "which are not themselves immediately experienced at the moment".[1] — Thought universally refers the object or presentation from which it starts to other objects outside of this. We think inevitably of the relation of identity of this first object to them, or of its difference from them, or of its various other relations. But while we necessarily transcend the first object or presentation, we do not necessarily transcend the entire complex of immediate experience. Here is a wealth of 'items' already present in the field of immediate experience with the character of 'feeling' which

[1] G. F. Stout, *op. cit.*, vol. i., p. 44.

they share in common and the distinguishable character of their groups. Why should our thought not be confined to them, to their common character, or to the character of their groups? Doubtless there are countless other items not presented which also share in this common character. Why must our thought be troubled with them? It has already a number among which its "discursive" thought can roam and verify the presence of a common character.

XIII.—The Psychological and Metaphysical Conception of Thought.

In the work of the older writers, the psychological and metaphysical treatment of thought were often confused. Thought, according to Kant, was objective reference, and if we take the semi-psychological interpretation which has often been placed, but now held to be mistakenly placed, on his language, then our sensations were, in the first place, subjected to the pure forms of space and time and then transformed into objects through the action of the categories or universals. Thus thought seemed to consist, in this half-psychological conception, in the activity of universals. These universals were not presentations, were not immediate experiences, on the contrary they were the agents which transformed these experiences into objects. This doctrine has markedly influenced all our conceptions of thought at the present day; and the confusion between psychological and logical thought is partly due to it.

We have found relations and a universal character in the heart of the feeling-*continuum*. What is this universal character? It is not a feeling. It cannot be presented. It is a symbol of other realities. It is an idea. It is thought.—But this universal, this thought which is never an experience is not the thought of psychology. The thought of psychology is experienced. It is "the present pulse of thought". And it is in these pulses of thought in constant change, and by their activity, that this universal, this world-thought, is discovered. The universal penetrates all reality, including our immediate experience, whence the universal character which we discover in it. We *find* what the universal character of our experience is: this universal character *makes* our experience what it is. Our thought—the thought of Psychology—discovers the character of its object,—discerns the identity as it discerns the difference: this thought—the thought of logic or metaphysic—constitutes its character.

But in psychology we have nothing to do with this

idealistic interpretation of the nature of every object as thought. For us this nature is simply a common nature. And at all events it is not *our* thought. Our thought deals with it, discovers it, identifies it. Our thought is now occurring: and as well might we confuse it with the difference of its object as with that object's universal character or identity. Yet it is due to the confusion between this metaphysical and this psychological conception of thought, that we owe the false doctrine in psychology that thought must necessarily transcend immediate experience. Once speak of universals as "symbols," "ideas," thoughts, transfer this conception to psychology, and it is obvious that we cannot limit thought or the universal to the experience which it qualifies: thought in this sense must transcend immediate experience. Surrender this metaphysical conception of thought, with which we have nothing to do, take thought as the discriminator, the identifier of objects, as the witness not the constructor of experience, and the doctrine that this passing thought must transcend its immediate experience is no longer obvious; and when we apply it to interpret the infant-mind becomes in the highest degree doubtful.

It is, then, at least possible that thought may be confined to the complex of immediate experience. There is nothing in its referring, discursive character which necessitates any other objects than a multiplicity of different presentations contained in the *continuum* of immediate experience. The definition of thought which has come down to us from Kant, that thought is a reference of presentations to objects which are not themselves presentations, is at least non-proven. And as applied to the infant-mind, it is not merely improbable, it is an unreasonable assumption to make, because it is not required for the interpretation of the facts. The only objects that we need assume are the distinguishable and co-presented sensations. And as far as we can judge the earliest thought in the infant-mind begins with some discrimination between these sensations. Preyer remarks[1] how very early, as early as the first few days after birth, the difference between light and darkness appears to be discriminated. With the constant opening and shutting of the eyes, it must be one of the first, as well as of the most marked, of the changes that we directly experience. It may be that this simple discrimination of light from darkness is the infant's earliest thought, and there is no ground for

[1] *The Senses and the Will*, ch. i.

assuming that it must be complicated by the identification of the light as light and the darkness as dark. The discrimination of bright light and bright colours from the duller sensations around them seems also to be one of the earliest thoughts. But it is more difficult to say what is the first thought of the *same*. It may lie between co-presented sensations of the same class as distinguished from other sensation, or what is more likely, between a sensation which has been several times experienced and the reproduced images of similar sensations. If a few days after birth a child is apt to cry if turned away from the light, it may well be that the image of the light is still with him, contrasting with his present duller sensations, and when he is again turned round to the light he may identify this image with the fresh sensation at the moment of their fusion.

We have then to give a definition of thought which is strictly universal, and which does not make the assumption that thought commences with the conception of an object not contained in immediate experience. Thought universally transcends that from which it starts, universally refers to some object beyond it. But what does 'transcend,' what does 'refer,' mean? It means that we can never confine thought to the central 'item' from which it starts, that it inevitably thinks of what is outside this item, even if that be only the sensational context. All definitions of thought are deceptive. They are not strictly definitions. They have only a suggestive value. The *differentia* of thought is irreducible; we cannot decompose it; and if we press the meaning of the term 'reference' we have to explain it by the term 'thought'. It is the same with the terms 'discrimination' and 'identification,' which we have so frequently employed. They are more suggestive than 'thought,' but like the phrase 'objective reference,' they are no simplification of its conception. Discrimination is the conscious thought of difference, and identification the conscious thought of agreement or identity. Like so much in the mind which we vainly attempt to analyse, the *quale* of thought defies analysis and remains absolutely unique.

XIV.—Thought as Feeling.

We are so accustomed to the antithesis of Thought and Feeling, of thought and sensation, of the knowing subject and its experiences, of attention and the field of presentation—in one form or another, of the dualism of consciousness—that the contradiction does not strike us when, in the

exigencies of our situation, we are forced to take the present thought in its relation to sensation to be an occurring thought, the knowing subject to be, not its bare abstract character, as if that could work independently, but the present particular knowing attitude which has this abstract character; and attention to be no more than attending. For this attending, this knowing attitude, this thinking about sensation, is itself, as process of change, part of the continuous stream of immediate experience. Thought, that "central part of the self, is felt". It is "no mere *ens rationis*, cognised only in an intellectual way; no mere summation of memories or mere sound of a word in our ears. It is something with which we have direct sensible acquaintance. . . ."[1] Were it not so we could no more form a conception of its unique and irresolvable character directly present to us in all our experience of thought, than we could of the unique character of a visual or auditory sensation without a direct experience of them. But if thought is itself an immediate experience or feeling, what becomes of the familiar opposition between them? We can no longer maintain that the universal character of feeling is absence of objective reference, since in thought we have a variety of feeling of which the specific character is objective reference. But if feeling cannot be defined by absence of objective reference, how are we to distinguish it from thought? Our problem is now to describe feeling positively, not in negation to thought, and to regard thought not as opposed to, but as a variety of feeling. Feeling, then, may or may not have objective reference, may or may not identify and discriminate objects. But, whether or not, it has the positive character of immediate experience. Its essence is "in being felt".[2] And this holds true of thought itself, as well as of the sensations of the special senses. And although all feeling cannot think, cannot identify and discriminate objects, all feeling can be thought of, can be identified and discriminated object: and this holds true of thought itself, as well as of all sensation. But any particular feeling may not be thought of—may neither be identified nor discriminated: and this holds true of thought itself, which in greater part is undiscriminated. Feeling universally lies open to thought; and thought as feeling lies open to itself.

Feeling then has two universal characteristics: it is felt; it is capable of being thought of. With regard to this second

[1] William James, *op. cit.*, vol. i., p. 299.

[2] G. T. Ladd, *Psy. Ex. and Des.*, p. 165.

characteristic we may predicate of feeling, what the philosopher predicates of the world: it is intelligible. What more can we say? We cannot analyse feeling into anything simpler: we cannot define it. We cannot contrast it with anything in the mind which is not feeling, because all is feeling. We can only contrast it with its own unique varieties. Feeling is not essentially visual sensation, not even organic sensation: feeling is not essentially thought. The last contrast is the most striking and suggests the clearest negative conception. But if we desire a positive conception we must be able to grasp what is meant by 'experience,' which we try to make clearer and more emphatic by the qualification of the adjectives 'direct' or 'immediate'.

We come next to the character of thought, how do we distinguish it? Its positive character is to have an object distinct from itself. Its objective reference means "reference to an object other than the mental state itself".[1] Its object is not essentially outside the field of presentation, but is essentially other than itself. And this restriction of primitive thought to the field of presentation does not affect its universal character. Its range is more limited. But within this limited range the same relations await the identification of thought as outside, relations of co-existence and succession, of difference, resemblance and identity. It is this reference of thought to something other than its present thinking which distinguishes it from all varieties of feeling that are not thought—from organic and muscular sensations, from sensations of temperature and all special sensations.

XV.—The Antithesis of Thought and Sensation.

"There are two kinds of knowledge, broadly and practically distinguishable . . . *knowledge of acquaintance* and *knowledge-about*." They are broadly distinguishable but still "relative terms". For "the same thought of a thing may be called knowledge-about it in comparison with a simpler thought, or acquaintance with it in comparison with a thought of it that is more articulate. . . ."[2] The words *feeling* and *thought* give voice to the antithesis. Through feelings we become acquainted with things, but only by our thoughts do we know about them."[3] This is what the words mean in their ordinary sense—feeling does but emphasise the constituent of immediate experience, and thought

[1] W. James, *op. cit.*, vol. i., p. 186. [2] *Ibid.*, p. 221. [3] *Ibid.*, p. 222.

that variety of it which has a reference beyond itself. Neither term in this popular sense wholly excludes the meaning of the other: it is but a difference of degree. And we have only to identify this ordinary meaning of the terms with the character of the facts, and the conclusion is reached that feeling though in a lesser degree is universally thought, and thought though in a lesser degree is feeling. The "feelings from our viscera" and all our sensations are thoughts having a cognitive function, and objects distinct from themselves. "They may be faint and weak; they may be very vague cognisers of the same realities which other conscious states cognise and name exactly . . . "[1] but they still remain conscious, never become unconscious—they are always noetic, never anoetic states.

But this identification of the meaning of the terms with the character of the facts, on what evidence does it rest? While for instance I am thinking about some present organic sensation, how do I know that this organic sensation is not thinking about something else? I cannot directly know the contrary. I cannot directly prove that sticks and stones do not think. If, as appears to be the case from hypnotic experiments, consciousness "may be split into parts which co-exist but mutually ignore each other,"[2] why should not every sensation, as long as it is a present fact, enclose a world of its own and deal with that, as *we* deal with it? All this is conceivable: we cannot directly prove its non-existence: we cannot prove its existence. There is one and only one thought we can experience, our own. Our present thought may be dealing with a state of the body, an organic sensation. This present organic sensation about which we think, may have a thought of its own about something else, perhaps about our own inquisitive attitude toward it. But of its thought, if it exist, we have no experience; we only experience our own. There is no evidence for asserting that it has a thought: there is direct evidence for asserting our own. But supposing that when our thought is introspective and thinks of its sensations, there were as many other thoughts within us as there were sensations discriminated, these thoughts would still not be the same as the sensations that had them. Does this require any proof? Our thought experiences the sensations; but it has no experience of their thoughts. There must then be some difference between them. Nothing can ever make an organic sensation qualitatively the same as its thought if it have one. If a

[1] W. James, *op. cit.*, vol. i., p. 174. [2] *Ibid.*, p. 206.

sensation of blue discriminate between two sensations of green contiguous with it, this discrimination is not the blue sensation. The thought may be one with the sensation, and no more than its inner and hidden reality; but analytical psychology must distinguish between them. The antithesis between thought and sensation is based on the unique character of each, and like that character is irresolvable.

But will not this distinction break out even in thought itself, which we have taken to be a peculiar variety of feeling? What kind of a feeling is thought? Can we localise it in some part of the *continuum* of feeling? "Whenever," says Prof. James, "my introspective glance succeeds in turning round quickly enough, . . . all it can ever feel distinctly is some bodily process, for the most part taking place within the head." The "acts of attending, assenting, negating, making an effort, are felt as movements of something in the head".[1] And "if the thinking be *our* thinking, it must be suffused through all its parts with that peculiar warmth and intimacy that make it come as ours".[2] This warm sensation in the head is the feeling of our thought? Yet our thought may clearly discriminate it, and be obscurely aware of itself. Our thought in its reference to this feeling may take up several attitudes: 'Is this feeling what I am? it may be: let us suppose it is'. But the feeling itself is not successively these three attitudes: it is neither a question, nor a problematic judgment, nor a supposal. And if the warm feeling in the head be, in some sense, the feeling *of* thought, thought is certainly distinguishable from it. There is a qualitative difference between them.

But in what sense is this sensation in the head the very feeling of thought? Is the sensation anything more than a constant accompaniment of the thought? A muscular sensation ordinarily accompanies will and conation, and a sensation in the head, thought. This is the only verifiable connexion between them. In the next case, we can point out in what the feeling of thought consists; and it does not consist in this warm feeling in the head. Thought is at least qualitatively different from this feeling. Thought has by general agreement a unique and irresolvable character. We should never have any conception of this unique character, unless we experienced the thought which has this character. And we must experience it in its qualitative difference from those warm feelings in the head with which it is connected. These feelings in the head we also experience: these feelings

[1] *Op. cit.*, vol. i., p. 300. [2] *Ibid.*, p. 200.

we also identify and interpret by thought. As so interpreted, they are found to have the peculiar quality of organic sensation interpenetrated with the sensation of warmth. Our thinking we also experience: our thinking we also identify and interpret by thought. As so interpreted this feeling is found to have the peculiar quality, not of warm sensation, but of *thought*. The feeling in which thinking consists is this unique feeling. It has its own character. It no more has the character of organic sensation, than of visual and auditory sensations, which likewise have their own unique quality.

III.—TRUTH AND HISTORY.

By J. B. Baillie.

One of the most interesting and suggestive results of recent philosophical inquiry is the position that the discussions which gather round certain facts in our experience can be separated into two kinds which are really quite distinct from one another, and to each of which, it believes, perfect freedom may with impunity be granted. It maintains that the investigation which deals with the growth and change of the fact considered is radically different from that which seeks to determine what is the inner and essential nature and meaning of that fact itself which undergoes the process, and that, the inquiries being so different, we need not apprehend any conflict in their conclusions. This distinction assumes various forms according to the nature of the problem in hand. Sometimes it reveals itself as the assertion of a difference between 'eternal truths' and the particular appearance which these truths may manifest at any given time; or again we meet it when it is claimed that the history of a doctrine or belief is one thing, but the belief which has the history is quite another and must be considered separately; or further it appears in the emphasis laid on the distinction between the psychological treatment of the process or processes in a judgment and the discussion of the validity or truth of the judgment itself. But in all these cases, and these are typical, the same essential features are preserved. And for various reasons such a distinction is considered to have its claims justified and its value assured. The trend of recent scientific investigation in every department of its work has unquestionably been to lay unusual stress on the historical aspect of the facts under consideration. The eager search for those primitive elements or primordial forms under which facts physical, chemical or biological originally appeared, and from which by involution and evolution the various manifestations which have appeared, or do appear, must, given time enough, have gradually unfolded themselves in the context of reality, is the most pronounced expression of that method of inquiry

which finds its complete satisfaction in the discovery of the transmutations of its object; in the reduction of its facts to their antecedent constituents or conditions in order to show how these worked themselves into the facts from which the inquiry starts; in the retracing of the present complexity of phenomena back to a simpler, more continuous form, where the present differences are either sunk into indistinction or are less prominently manifested. And it is clear that what is legitimate as a method in a number of sciences, and has there worked successfully, is legitimate in every sphere where the facts are subject perceptibly to change. Hence, since every object which we can consider has a temporal aspect and since time simply means change, every form and feature of reality without exception has been subjected to the treatment of this method of science which is so distinctively modern. From the orbit of a planet to the judgment that the planet has an orbit—everything has a history. Now the singular fact to be noted is that this which is a method of science has by reaction on the thinker become or produced an attitude of mind. The scientist rests completely satisfied with the tracing of the process; with the discovery of the history the inquiry ceases, and all has been said that can be said. And it is against this limit to discussion maintained by science that a protest has been raised. This protest started from and has its strongest claim to consideration in the field of the moral and religious life of man, but it does not require much insight to discover that it takes in a much wider area of facts. Its purport is to emphasise the necessity for confident absoluteness in the sphere of duty, for certifiable unchangeableness in our elemental beliefs; it takes its stand on the purposes and ideals which give value to life and maintains that human existence would be in blunt contradiction with itself if that which man considers the enduring basis of his being awaits in perilous security its own annihilation. And this protest gradually reveals its rational ground. For the view declares further that things not only *become*, they *are;* that what they are logically precedes their possible becoming; that facts which appear are not absorbed into their appearances but are the permanent basis of them; that if things are simply their own appearances, then it is impossible to connect them as the appearances of those things of which it is asserted they are the appearances, for then each appearance would be a new thing; that there must thus be an inner kernel or content of identical (*i.e.*, unchangeable) import which remains and endures through all change. This is applied to all spheres of reality, and more

particularly to ideal judgments, *i.e.*, to the spheres of goodness and truth. Here indeed, we may say, the position takes its ground to begin with, and this it makes its firmest stronghold to the last. One of the final results of the defence it has made is the statement with which we have opened this paper. The value of the position in other regards need hardly be pointed out. It means for instance the securing for metaphysic a place among the sciences, it means the defence of knowledge from a hopeless relativity or an utter scepticism, and it has quite obviously a decided practical significance. The position then, we may take it, has secured its foothold; and it is defended by thinkers of various schools, as we can discover from the writings of Prof. Seth, and from the unofficial but none the less pronounced and unambiguous utterances of Mr. Balfour.

Now there can be no question that the distinction maintained is of most vital importance. The temporal aspects and appearances, the history, in short, of our judgments, let us say, is assuredly very different from the truth which the judgment expresses, from the knowledge which it conveys, and which as knowledge is true without further reference. But this distinction, taken as it stands and as it is currently stated, without further elaboration, discussion or examination, has simply increased our intellectual clearness at the price of our intellectual perplexity, and has drawn us from the treacherous allurements of a ruinous simplicity to place us in the midst of a less attractive intellectual confusion. For when the inquirer, possessed of this new distinction, and doubtless enriched thereby, proceeds by the help of it to find some satisfactory way of uniting those two diverse matters and modes of discussion, he soon learns that not only does he get no help from the distinction for his purpose, but that the distinction itself makes all such attempts fairly impossible. And his attempt to discover this unity is entirely justified and indeed inevitable. For clearly it was to relieve the mind from a false unification and simplification that the above distinction was made, but surely never to prevent unification being sought; and obviously it is useless to try to allow two distinct discussions to start from and refer to one object at one and the same time, and not attempt to unite the results of those two discussions into one conclusion about that one object. Now it would seem as if the cause of the error in the former case mentioned above is similarly operative here also, and that the diversity of method of approaching the problem has produced not merely diversity of conclusion, but thorough-

going opposition. The dilemma is briefly this: The discussion of the *history* of a judgment,[1] let us say, is admitted to be a perfectly legitimate and independent inquiry; the discussion of its *truth*, its *validity* for knowledge, is likewise a legitimate and independent inquiry. Now the deliverances of both these inquiries must be accepted as true and valid conclusions, each as it stands at its own worth. The assumption and the conclusion in the first inquiry necessarily maintain and imply that the judgment under discussion, because having a history in time, must and does change. The assumption and conclusion in the second inquiry necessarily require it to be maintained that the judgment, because true or valid (or because having truth or validity for knowledge), is, as true, true universally, *i.e.*, does not and cannot change. Now both of these conclusions are true. But if the first conclusion is true, then the judgment can *never* be universally true or valid, for it is *always* in time, in process, and that means change. Yet again if the second conclusion be valid, then clearly the judgment has not and cannot have a history at all and cannot change, for to be universally valid or true just means that it is beyond the limitations of any particular time; universal means simply indifference to time and therefore to change. Out of this dilemma there is apparently no hope of coming; and yet to avoid the dilemma means simply to close our eyes to a glaring contradiction. Let us take any judgment we please and apply it, and the same conclusion holds, and the case of the problem which we have chosen is quite typical of the general question. Take any other instance, beliefs, doctrines, 'ideal and fundamental truths' and their respective histories, and grant legitimacy to both kinds of inquiry above mentioned, and you find yourself transfixed mercilessly by the same dilemma which stands rooted in the problem in all cases. And out of this fatal perplexity the problem itself, with these presuppositions, which have hitherto lent meaning to the distinction, and the admission of which has been granted on all sides, will not allow us to pass. For the difficulty is not in the least imaginary or due to ambiguity of language, or misconstruction of ideas. It will not help us, for instance, to say that no one ever claimed absolute universality for the truth of a judgment, that a judgment is only asserted to be universally true inside that sphere to which, by its content and by time, it is confined. For here again, within this sphere itself, precisely the same difficulty

[1] We might generalise this problem; but what is said applies universally, and the particular case cited may suffice.

breaks out, not to speak of others which are created. Because when we assert that inside the sphere in question the judgment is universally valid, we are forced at the same time to admit that inside that same sphere, and the process which that sphere as a particular part of reality is *ipso facto* necessitated to undergo, that same judgment has had a history ; for process is knit up with change and time, and that means history. We shall not be able, therefore, to assert that even inside this sphere the judgment is in reality universally true ; or if we do assert this, then we throw ourselves against the other horn of the dilemma. Nor will it be of any assistance to maintain that universality just means outside of time altogether and that hence by our very assumptions a conclusion which bears on or "possesses" universality *cannot* be affected by or refer itself to one which only holds of what is inside the temporal process. For if we insist on the absolute disparateness of the contents of the respective judgments, how will it ever be possible to bring the two together into some intelligible connexion? If what is inside time is utterly severed from what is outside time, how are you going to harmonise the two? For, be it noted, you most certainly must harmonise them ; you cannot leave the two side by side and say it is an uncalled-for inquiry. The inquiry is imperative because both statements, both judgments, refer to and hold of one and the same object ; for the object discussed is surely the same object in both cases. How then can that object have utterly opposed judgments valid of it ?[1] Is it at all possible or thinkable that one object actual and concrete in its unity should ever possess aspects or kinds of content so utterly different as even to be conceived as unrelatable or unaffected by each other? Nor again dare we console ourselves by supposing that universality and truth in a judgment need not after all be very strictly insisted on, that they are not so supremely essential to the case. For precisely the reverse is maintained and must be maintained; and with sound reason. For it is exactly because a judgment has truth and claims universality that it is on the one hand worth our while and necessary to seek and state its history, and on the other that it is even possible to do so. If it had no universality there would be absolutely no sense in attempting to trace the history of what as a matter of fact could have no history, because it would be so absorbed and mutilated by the process which it passed through that the two

[1] To say that the two judgments refer to two correspondingly different elements in the object itself is quite obviously just restating the problem. It is in fact the same problem from another point of view.

ends of the process would be entirely unrecognisable and no identical factor could connect them and the intervening processes together as forms or modifications of one identical object. Knowledge in such a case would have simply no meaning. Yet strange enough it is simply because the judgment must be universal that our perplexity has arisen! Nor, further, shall we be assisted by struggling to maintain that the two 'aspects' of a judgment considered are in reality so distinct as to be almost *sui generis*, and no possible confusion or contradiction can therefore arise in the conclusions come to by the different discussions of each. This view simply increases the perplexity of the situation. For as a matter of fact the conclusions arrived at by both discussions contain elements which are unquestionably in abrupt contradiction with each other. Surely to assert that a judgment has a history and that it is universal and has therefore none, and can have none, are directly contradictory statements. 'But,' it may be said, 'the two "aspects" considered are distinct, the facts started from are *really* different, and each discussion can therefore proceed comfortably in its own way.' But in the first place both these aspects, both these kinds of facts belong equally and in their own right to that one object of consideration; they *cannot* therefore, and for that reason, be so diverse as to be unrelated or produce conclusions which are in any wise irreconcilable. And, in the second place, the object matter is actually one and the same in both discussions, and this without qualification; it must be so. For a judgment, being the expression of knowledge, has its very being in the truth to which it gives utterance. Apart from this it is nothing, and more than this it does not contain and more it does not profess to be. When we discuss a judgment in any way whatever it is judgment in this meaning and sense and in no other that we discuss. What two 'aspects' then can there possibly be, which can be treated so separately as to produce such diverse results? The answer offered is that one aspect is its character or aspect as a real existence, as a conscious fact of mind, as a psychological phenomenon; the other 'aspect' or character is found in the fact that it is the expression of a truth, is a form or utterance of knowledge, and this is quite distinct from the former aspect. In the first character it has, as an existence, a history in the conscious subject or in the development of the race also; in the second, its epistemological ideal aspect, it has and can have no history; it has truth, validity, only. Now are we discussing judgment actually and truly in the first case or are we not? There is nothing, be it remembered, to discuss in judgment except in

so far as it is the embodiment of knowledge. The truth which a judgment expresses is not contained inside a shell of factual existence in the mind which can be thrown aside and leave the truth, if we are ingenious enough to separate the two. The judgment as a truth of knowledge is precisely the same as judgment as a fact of mind. For if it is not, if the judgment in the psychological reference is either the mental environment of the truth expressed, or its antecedent conditions, or the mental factual base of an ideal truth, or the mental 'conditions of the possibility' of a universal truth, or anything except barely and literally judgment as knowledge without qualification—we may be discussing something perhaps very necessary in its way, but it is emphatically not judgment in that signification which gives it meaning for knowledge. Of judgment it holds without reservation that form and content are through and through identical; it has not a form of existence and a content of truth; or rather its form is just its content, and its content its form, the knowledge it expresses is that which exists, and that which alone is, is the knowledge expressed. 'But in admitting this disparateness of existence, and of truth existing, are we not allowing all that is claimed by the view we are discussing, and thereby giving up our own criticism?' Our answer is that we are not by any means denying that there is this difference of the characters or aspects stated; what we are maintaining is that these two aspects cannot be discussed in their disparateness simply and solely as such without taking the *whole* judgment with *all* its significance along with us in the discussion; that if we could discuss either, barely and alone, the discussion would not assist us one step, we should not be discussing that which itself gives meaning to the discussion; the whole procedure, in short, would be a futility, and could only be maintained by the implicit and unconfessed admission into our inquiry of elements which we purposely declare to be excluded. If, then, our contention is valid, probably much of the psychology of judgment would vanish, but certainly not our present perplexities; the method of loosening them by distinguishing 'aspects' of a judgment as above has proved quite helpless, because when these aspects are properly understood and discussed, we find ourselves still in the troublesome insecurity of our original dilemma. Nor once more shall we get free by declaring that the unchangeable validity, the universal truth of our judgments is never really a fact for knowledge, is never realised in it, but that, though it is none the less essential to knowledge, it must be maintained to be an ideal; the knowledge, the

judgments we have and form, are all in process towards those ideals, but just because they are in a process, they never complete their history and realise these unchangeably valid truths. This subterfuge is probably ingenious; it can hardly be considered comforting. For, not to return to the difficulties regarding a non-temporal universality, surely there can be little security for the validity of a judgment regarding the changeless character of ultimate truths when that judgment itself can be drawn from no other source (our actual knowledge namely) except one which is admittedly fused in change. And what help does it give to the discovery of how a judgment can at once be universally true and have a history, to be told that it is not universally true at all, that this lies outside our knowledge in a sphere of ideal forms? how can we aid ourselves in the solution of a dilemma which falls inside knowledge by appealing to what lies outside of knowledge altogether, and which, therefore, can neither cause nor cure our confusion? Clearly, if universality were taken in that sense the problem we are discussing could never arise; indeed, universality of judgment would not exist. Now, without question a judgment is *at once* true and universal and has its own history; science, and indeed the very meaning of knowledge, claims both these qualities of its judgments. Knowledge would be impossible, science a fiction, if it were not actually and as it stands taken to be a system of universal truths expressed in judgments. And the change infects the character of the judgment just as it stands and without qualification. We now seem to have tried every avenue of escape within sight out of this charmed circle, and with no result whatever except the grimly satisfactory discovery of its compact impenetrability. Other channels of exit we think there may be, but we should doubtless find them leading to those main portals we have attempted. The dilemma, therefore, remains fixed just as we discovered it; and now we find ourselves so pitilessly bandied about from one side to the other, that we begin to wonder what comfort and security we could ever find in that so helpful-seeming distinction which was to save us from a simplification or unification which would have hurled us and all that we deemed lasting, abiding and precious, along the merciless stream of merely hurrying process; and which was to deliver us at once from the self-evident absurdity of maintaining we had no history, and from the paralysing hopelessness of confessing we had nothing else. And we have not either imagined or exaggerated the situation in which we find ourselves; we have simply taken the deliver-

ances as they were given us with all their obvious assumptions and with that view of process in time which they acknowledge the scientists whom they oppose to be justified in holding, which, in fact, they share with these latter, and which gives point and purpose to their contention and claim that elements, facts or aspects exist which cannot be admitted to fall within the sweep of that process.

Is there then no way out of our perplexities, or shall we have to acquiesce in the acceptance of directly opposed and radically contradictory conclusions of two legitimate orders of science, which arise from the accurate application of two equally necessary methods of scientific inquiry, and thereby to admit that knowledge in general (for *all* the spheres of reality known have these two features and characters which necessitate the two methods in question, the problem being as we saw quite general) is in the last resort utterly incompetent to secure that completely determinate self-consistent unity, the demand for which by the mind of man it professes to be able to satisfy? There seems to us only one resource from our imminent intellectual bankruptcy, and that is to be found in a revision of the conception of a temporal process; for it is this, obviously, which is the source of the difficulty. Such a revision we shall now attempt to give. If we take the fact of change, of process, simply as it is presented to us, without attempting to view it in reference to an end or what we should call a purpose, we shall find its significance, its content as a fact, to lie in this, that it is a mode or means of manifesting difference in that which underlies and undergoes the process. Further it is characteristic of this mode that the differences appear as antecedent and succeedent, that is, the presence of given differences or of a definite arrangement of differences requires and is only possible by the removal of other differences or of an arrangement of differences. That which retains or undergoes these differences is not separated from them, but is identified with them, while inasmuch as it contains various moments of difference and is not absorbed entirely in any one, it has a wider, larger reality than any particular difference or arrangement of such, and in that sense is distinct from its differences. Now quite similar, nay identical statements and considerations hold good of reality in another of its aspects. When we are presented at one and the same time with a number of different appearances of the same object, that is when these different manifestations are each separately and at the same time considered as determinations of a reality which is intelligibly the same in all these different forms, we have here again as

above precisely the same conditions to work with. We have a definite object (kind of reality) in principle identical in all those individually different appearances of it, and in all cases identifying itself with the characteristic arrangement of differences which appears in each, but because not wholly absorbed in any one, it is in itself wider, larger than any of these different forms of it. We have, again, differences which have each a specific quality which makes it impossible to substitute one for the other; each of the different individuals excludes every other, but instead of one ceasing to be and giving place to another (as in the former case) they all exist side by side and at once. In other words differences can be simultaneous as well as successive. Instances of simultaneous difference are easily found. To take our former example of judgment, it is surely only too common to discover men's judgments regarding a given subject disagreeing very considerably, indeed it is uncommon to find anything else, and yet they all, while acquiescing in the differences of judgment, and allowing that each man is at liberty to hold strenuously by that judgment which he considers the truth of the case, declare just as strongly that 'at bottom there is no disagreement, they all really mean the same thing'. The more this state of affairs is considered the more astonishing and extraordinary it appears. Still there can be no question that this fundamental community of understanding does exist and must exist. The very continuance of society, for example, in all its multitude of diverse and conflicting interests, each of which has its active representative, is a perpetual guarantee for the essential agreement which cannot but exist in the midst of, if in spite of, that difference. Now it is evident from the foregoing that the diverse elements, aspects or forms of reality (namely the universality or community of content, and the particular and varied appearance of this content) which gave occasion for that distinction in method of treatment which we have already discussed, are actually and completely present in this second mode under which difference manifests itself. We cannot maintain that the factor time is present in one case and absent in the other; for it is obviously present in both, in the first as successiveness, in the second as simultaneity, and both of these characteristics or qualities of time are absolutely essential to its meaning; the one is as necessary as the other. The conditions of reality therefore which start the discussions necessitated by the distinction above insisted on are quite unaffected by the temporal quality under which these conditions may appear. The colouring which the dis-

cussion may receive from the introduction of time in any way may consequently be entirely removed, and the problem which in the last resort is the only one we have to face (the existence in reality of a universal content, principle, concept, as we please to call it, and different appearances of this content) will remain unaffected thereby. Time in short may be dropped out of the discussion altogether and no reference made to it. For if the discussion is necessitated, no matter under what temporal aspect the features of reality, requiring the discussion, manifest themselves, clearly time is indifferent to the problem, and the problem indifferent to time. And we see this from another line of consideration. In time as successive we have, in the case of a given object with a 'history,' precisely the same facts to consider as in the case of a number of objects generically the same appearing side by side. For on the one hand we have different appearances of that one object, the object at *different times* is an *individually* different object; it is as if the object in question had divided each of its appearances from one another by intervals, each being thus an isolated realisation of the object. Now if we regard not merely this one last appearance in the history of the object, which we have before us in the actual present, but look at the whole series of isolated appearances which as a matter of fact the object has presented, and consider this series as actually before us at once (as would be the case to the mind of an absolute understanding), we have precisely the same facts in front of us as we have in the second form of difference above stated. Precisely the same without reservation, for each of these diverse appearances in the series is one appearance of the object just as is the case when individual instances of the same object are presented side by side. On the other hand again take the various appearances or 'instances' of an object which appear simultaneously, and suppose an intelligence (with perhaps less extent of range of attention than ourselves, though this qualification is not really necessary) to move from one appearance to the other, we should have exactly the same facts before us as if that object had passed through a process in time, and to an absolute understanding again they would appear just the same as if they had undergone a process. And we are not forgetting the facts of organic continuity of development, for this conception would be quite accurately attained in the case of the intelligence assumed, provided this intelligence moved from one to the other, not arbitrarily but according to a fixed principle, say the degree of realisation of the unity of content in the various differences. Now if the foregoing argu-

ment is accurate, and time does not enter into our problem at all to determine its essential character either one way or another, the hopeless confusion into which we were plunged by the distinction as above formulated is at once cleared away, for the dilemma has now ceased to exist. And no other solution of the difficulty seems able to assist us, or seems indeed obtainable. The only alternative therefore to denying the truth of this suggested solution is to accept the bankruptcy of knowledge as an unaccountable but established fact. But if this interpretation be accepted then certain consequences of considerable significance have to be noted. Before mentioning these, however, one or two objections to the foregoing may be answered by anticipation. It may be said, for instance, that we have not delivered the problem from time, we have merely shown the indifference of time to the problem. 'For differences,' it will be said, 'appear at different times, and hence the general or identical nature in these differences at different times is different in these various times and thus the old difficulty breaks out.' But this is in reality a repetition of our own view, because 'to be different at different times' means absolutely no more than to be different; the statement in fact is a repetition of itself. Of more importance is the objection that we have simply shifted the problem which is actually started by that distinction above suggested which brought contradiction into knowledge. We have, it will be said, put the problem into the form of an attempt to show that unity can still be unity, though it appears differently, that universality and validity can be predicated of, can belong to, a judgment which nevertheless appears differently; but how this is possible or thinkable we have not shown. But to begin with, this objection is largely a misunderstanding. It was not our purpose to show how certain fundamental aspects of reality are thinkable; our business was to dissolve a contradiction which was clearly inevitable from the start between the conclusions which would be arrived at by the treatment of reality according to methods which by their very nature and assumptions could not produce results other than radically irreconcilable. And this inevitable opposition which would arise we consider we have obviated. For it has been shown that the aspect of reality which is actually considered when we are discussing the 'history' of say a judgment is nothing other than the quite general fact of differences under which a judgment appears; and our discussion has also gone to show that these differences by their very nature cannot be treated simply as differences, but must be treated with reference to the general

content which they express ; and likewise *mutatis mutandis* of that general content. We have thus removed the contradiction in result, by removing the opposition in method ; we have in short destroyed the ostensibly radical opposition of the distinction insisted on, by pointing out that both sides of the distinction of method are at bottom simply reducible to one and the same method, raised by what is fundamentally one and the same condition under which reality appears. The difference between the methods which seemed so radical is thus shown to be simply a distinction based on emphasis on the aspect of reality considered, the method in both cases being in fact the same. And further that discussions must by their very nature produce contradictions is quite another position from the assertion that discussions will cause grave difficulties. That the discussion of the aspects of universality or unity and diversity of appearance will produce obscurities is not the same as saying they will inevitably produce contradictions. If we had asserted, or if it could be asserted, that universality of a judgment, say, entirely and completely absorbed itself in a difference *quâ* difference, then indeed would a contradiction appear, similar to that which we have already removed, and it is just such a contradiction which Mr. Bradley establishes in his discussion of unity and diversity. But when it is pointed out that unity and difference are bound up together, but that neither in reality annihilates the other, we have merely to discuss *how* it is possible for these two to be thought in relation, and this is in fact part of the business of metaphysic.

Granting then the validity of this view, let us indicate certain consequences. The first we would mention is the pure subjectivity of the time factor. For, seeing that the ultimate and final features of reality which exist, and the discussion of which is the essential and only problem of knowledge, are universality and individuality, unity and difference (express it as we choose), and since for the discussion of the real connexion of these features the time factor as we saw could be entirely eliminated, and indeed to deliver us from contradiction must be eliminated, it is evident that time is not constitutive of ultimate reality, is not in any strict sense objective. It must, therefore, be considered as a subjective construction, as a factor in conscious experience which owes its nature and its being, as a definite conscious fact with completely determinate content, to the creative activity of the knowing subject. It is occasioned by the reality of difference, and is the subjective form of the knowledge of difference in general, of the relating and connecting

of differences *as such* and *inter se*. But we saw that difference as such has no self-subsistent reality, and we saw too that the ultimate and final discussion in regard to difference must be the manifestation of a general content, a unity through and in difference, and the determination of the degree in which this unity is realised in the specific difference. But this being so the assigning a substantial reality to time as such is unwarranted and inadmissible. And we see that this alone will, in fact, satisfy the demands made by those who insist on that distinction of elements of reality and of the treatment of these which we mentioned at the outset. Unquestionably, as was pointed out, the distinction has its root in the claims of the moral worth, the ethical purposes of man, and the supreme obligation that the universe lies under of meeting his deepest needs with an affirmative, and fostering his fairest hopes. But this means that each stage in the manifestation of man's life, nay, each individual in every stage, shall actually and without reservation have it in his power to enter completely into the full inheritance of the promises, that he shall not be sacrificed that others may enjoy, that in short he shall be in his own person an end in himself and not the instrument of another, be that other even the race itself. What, it is asked, shall *man* think of a supreme purpose designed for man which is only shared in by those of the race who, forsooth, shall have had the good fortune to be born when it becomes realised, a purpose which will therefore only have become victorious by condemning to futility the millions of lives it has exhausted and left behind in the process? But if this relegation of the supreme purpose of man to the entirely indeterminate, 'far-off divine event,' be denied as morally self-contradictory and repulsive, the claims thereby implicitly and explicitly insisted on can only be satisfied by maintaining, and indeed nothing else is left us except to maintain, not that there is no purpose at all, but that the supreme purpose is realised completely at every pulse in the life of humanity, that the purpose does not lie in any beyond, but is immanent and actual completely in all the appearances which man's life presents. This is what is meant by breaking through the variety of form and manifestation in which man appears, insisting on the absolute and necessary oneness of nature and being man in all cases possesses, and refusing to admit that he is in any wise swamped in the process of his own existence. But if we deny the self-substantiality, and self-sufficiency of difference by removing utterly that end and purpose which would have given point and direction to its

various transitions, we destroy at once the *raison d'être* of a self-subsistent process of diversity, and with it the apparent independent reality of time, which was merely the form which enabled us to conceive difference as a self-sufficient process. And, as we saw, those claims put forward have much more than merely ethical significance; they reach to every department of knowledge. For it is evident that if knowledge be completely absorbed into the process which man's life would be supposed to undergo, knowledge would in reality cease to be. We need not speak of the quite obvious contradiction contained in the positive and absolute assertion that literally every truth is merely in a process towards truth, and therefore in the last resort not itself true; for if this statement be true then clearly it is likewise merely 'in a process towards truth and therefore not true'. It is much more important to note that such a view would remove entirely that certainty and confidence in principles of which we do not simply believe ourselves *coming* into possession, but actually possessing, a belief which gives us a basis of intellectual operation and an incentive to inquiry. On such a view nothing would be left but absolute scepticism, perhaps not even that. Yet the maintenance of the real validity of knowledge is only possible under the conditions which we have attempted to state in the foregoing discussion. But again if the circle of reality is ever in itself complete, if the plan of the universe is ever self-sufficingly realised, and the purpose of mankind ever immanently present, then it is clear that the purpose is not merely active over the race but in the life of the individual. It therefore follows that every 'stage' in the existence of the individual is in itself quite complete, that the various forms under which man's life appears (childhood, youth, etc.) do not exist simply and solely for the sake of those which succeed, but that each in itself is as 'perfect' (or as 'imperfect') as another. And indeed the judgments of ordinary life bear out this view. For why should it be supposed that, for instance, youth exists solely and primarily for manhood? If we say so, must we not also say that manhood exists similarly for old age? But if we may have a semblance of teleological justification for claiming the apparently rounded finish of manhood as the fit and desirable purpose of youth, how shall we venture to connect teleologically the completeness of manhood itself with that stage which is often 'second childishness and mere oblivion'? A much richer significance seems able to be attached to each form under which man's life appears if in every case it is fulfilling its own purpose; only

thus in fact can we give that inherent value to human life as such, in whatever forms it appears, which the position we have in view seeks to maintain. What sort of human existence would that be, we might ask, where only one form was to be found, or where only one form possessed in reality any value? And would any one be prepared to insist that a given form or stage had actually no value whatever in itself, but only had worth by reference to a form which would appear later? This at any rate would hardly seem to agree with current opinion on the subject.

We may conclude our discussion by pointing out the effect which the acceptance of its conclusions would have on two ideas of great influence in different ways and in distinct spheres of experience—the idea of Progress and the idea of Immortality. There can be no doubt that the view above indicated will at least require a modification of the meaning which is usually attached to these ideas. For it is clear that the idea of progress in its current acceptation is essentially knit up with time, as it is ordinarily treated. The introduction of a purpose at the end of events necessitates in those who accept such a view the conception of a gradual determination of events towards that purpose, a determination which is not only held to be implicit and unconscious, but can be made conscious, can become a moving principle of the conduct of men. But this involves that exclusive reference to, and regard for, mere process as a separate and self-sufficient feature of reality, which we have rejected. For this purpose in progress is conceived of as controlling history, as determining change simply as change; and it is considered to dominate that change as a *vis a fronte* just as causality is taken to rule events as a *vis a tergo*. And progress, we may note in passing, is as pitiless as causal determination; it is regardless of the individual, it is careful only of the end. But such exclusive reference to mere process, and such disregard of the value of human life in itself, we have seen, are both inadmissible. Yet though progress in this sense must be withdrawn, it expresses a principle which can hardly be overthrown without grave risk to the securities of our moral and intellectual life. The belief that even in the midst of defeat, and perhaps still more in the grim monotony of the commonplace, men are still facing betterwards seems necessary as a spring of continuous effort of any kind. It would take us too far afield to indicate, even if we could, the restatement which the idea would have to undergo. The question, we need only say, can hardly be considered to be merely ethical; there is other

progress besides moral progress. But in all cases there is the conception of a dominating end, and if instead of conceiving this end to be the external and final result of mere change we take it to be immanently existent, and if further we take the realisation (whether consciously or otherwise) of this end to be exactly proportioned to the extent or complexity of the area which it is to govern, this may perhaps indicate how we might harmonise our foregoing view with the essential significance of the idea of progress. Again as regards the idea of Immortality the only vital effect our conclusion might have would be to maintain that this idea must apply and can only apply to the actual and immediate immanence of man's life as it is in that of the Absolute. To suppose that Immortality 'begins' only after temporal and spatial dissolution seems simply to defend the idea from negations by removing every basis for a possible affirmation in its favour. Any reference whatever to time in fact seems to obscure the significance of the idea, and destroy the very principle on which it rests. For this principle is surely the insistence on the permanent, the enduring, the unchangeable, non-temporal element or character of man's spirit—an aspect which necessarily cannot be gathered up into or expressed by a mere process in time. How to conceive that immanence, however, it is beyond the limits of the present discussion to suggest.

IV.—DISCUSSIONS.

THE PSYCHOLOGY OF DEDUCTIVE LOGIC.

It is a weak point in the new psychology that it has as yet given so little attention to mental dynamics, if the term is admissible. We are studying conscious states rather than processes; in our revolt from the 'faculty psychology' we have been in some danger of neglecting mental activities. We have been taking the machinery of mental life to pieces in our laboratories, and examined each wheel and bar by itself; we have reconstructed the machine in theory—that is, we have seen how the elementary conscious states form parts of more complex states; but we have not yet turned the light of our new knowledge upon the machine in actual motion. One who reads for instance a book like Prof. Külpe's, while he cannot fail to be struck by the great superiority of the new science over the old dogmatism, must feel also the comparatively slight progress that has been made in the study of mental processes as distinguished from mental states. For this lack the old dogmatism is largely responsible. It, as we all know, fairly revelled in mental activities; it assumed a fresh and especial one to meet each emergency of mental life, and it is no wonder that the new psychology has turned away from this reckless multiplication of causes to an exclusive study of effects, of conscious contents; that, having reduced the many faculties to the one activity of apperception or attention, it has even feared that this power would have to be abandoned unless some peculiar kind of conscious contents were discovered to represent it. Whatever the reason, it seems to be a fact that modern psychology, even in its theorising, has not done full justice to the *movement* of mental life.

This is especially true of the process of reasoning. Take Prof. James' chapter on the subject; fresh and admirable as it is, its substance might be stated as follows: Finding that the middle term M is contained in the minor term S, and knowing that M is always associated with P, we conclude that S is P. We shall be good reasoners if we are sagacious and learned; it takes sagacity to find out that M is in S, and learning to know and remember that M is associated with P. Now turn to any text-book on logic, Jevons for example. You find matters far more complicated,—a wilderness of traditional technicalities, rules of fallacy, laws of thought; you are in a different world from that of the psychologist. What *is* all this to psychology? Of course, psychology is not

logic; but still these propositions and syllogisms are supposed to stand for mental facts. Antiquated as many of the terms are, they yet have a meaning, and a meaning, surely, that may be expressed in ordinary psychological language.

What follows is a slight attempt in the direction of giving such an expression to a few of the technicalities of common deductive logic. We shall discuss, first, the psychological nature of a logical term; second, the nature of judgment, and third, the laws of thought, the syllogism, and logical fallacy. I need only add that the discussion is not intended anywhere to trench on epistemological grounds.

First, about terms. What is there in consciousness that constitutes the general or class idea, the logical term? For instance, what presents itself to your consciousness when I use the word 'horse'? At the outset, naturally, the word itself. A complex of predominantly sound sensations, if it is heard; of sight sensations, if it is read; of movement sensations from the vocal organs, if it is uttered; while if it were merely thought of, any one of the three classes of sensations might predominate, according as you belonged to the visual, auditory, or muscular type. Now, after the word, what next? In many cases nothing. What often baffles an attempt to study introspectively the process of thinking is the fact that it so frequently consists in mere associations of words. Nine times out of ten, when you use the word 'horse,' another word will follow it so rapidly that only the name, not the meaning, gets into consciousness. But suppose the meaning does follow: what is the meaning, psychologically regarded? For me, in the case of the concept 'horse,' there succeeds to the word a vague schematic picture, the general outline of a four-footed animal of a certain definite shape but an indefinite or rather a greyish colour. By directing my attention to the various parts of this schematic image, I can bring into clear consciousness many of the properties which belong to all horses, such as 'four legs,' 'long neck,' 'mane,' etc. Next, certain words are called up by association, filling out the phrase "The horse is or has ——" so and so: words which do not correspond to anything my attention is able to analyse out of the just-mentioned schema, but which I have been taught to associate with the word 'horse,' such as the words 'graminivorous,' 'mammal,' etc. They are words that stand for some previous mental analysis which discovered in individual horses the qualities thus named. Lastly, the word calls up in my mind one or several images of particular horses with which I am acquainted or of which I have heard. In some cases one of these individual associations might be so recent or vivid that it would be instantly suggested by the name, and would entirely swamp the schema and the word associations. This would be especially true, of course, where one is personally acquainted with but a single specimen of the class. More often, however, one association succeeds another.

We have thus four distinct elements, so to speak, in the conscious state which constitutes a general idea, a logical term. First, there is that compound of sight, sound, and movement sensations, in various proportions as regards vividness, which we call the name. Secondly, a vague schema or picture, in which the attention may analyse out elements that are common to all members of the class. Thirdly, certain associations, chiefly verbal, representing the result of some previous analysis. Fourthly, the memory images of individual instances of the class. I do not mean to say that all four of these processes are always present: that is not necessarily true of any except the first, the name. Probably the second, the schema, is the one most frequently missing; but that it may exist, in spite of nominalism, for persons of ordinary visualising power, is clear from my own introspection.

Now, logic tells us that every general idea or concept may be viewed under two aspects, as regards either its extension or its intension. The extension of a term consists in the number of individual things to which the term applies. Its intension consists in the properties or qualities possessed in common by all these class-members. What, then, do the words 'intension' and 'extension' signify for the complex conscious state which we have found to be the psychological equivalent of the logical concept? It is not difficult to determine. The intension of the term 'horse' consists in those elements which my attention has been able to analyse out of the schematic image suggested by the word, and also it consists of those verbal associations which represent the results of an analysis previously performed by me or others. Sometimes only verbal associations are present; that is, instead of having the vague picture of a horse before me, and discovering in it four legs, a mane, a tail, I may simply have the words 'four legs,' 'mane,' 'tail' suggested.

As for the extension of the term 'horse,' so far as it is represented in consciousness, it obviously consists in the numerous and fluctuating associations of individual horses that we either know or have heard of. The familiar principle of the relation between extension and intension, "as the intension is diminished the extension is increased," would then become, expressed in psychological language: "The fewer the elements analysable out of the schema suggested by a general word, the fewer verbal associations representing the results of a previous analysis, the greater the number of associated instances that are liable to be called up". The reason for this is evident: a word which is associated with a few qualities only will, owing to the variety of nature, be associated with a greater number of objects than one which is connected with a larger group of qualities.

There is one more point to notice about the logical term. Suppose that all the four constituent parts of the total mental state corresponding to it are present: is it the name, the first part, or the schema, the second part, that suggests the individual in-

stances? Undoubtedly, it would appear, the name. The schema tends to fall apart into its elements if dwelt upon by the attention, and when it ceases to be a unit, each element would naturally suggest its own set of associations. Thus the element 'four legs' in a horse might suggest other quadrupeds, if the word 'horse' did not dominate the whole conscious state, and suggest only those individual objects with which it is associated. Psychologically, it is the name-word that holds any group of elements together and makes it act as a unit in determining associations.

We have next to consider the nature of judgment, psychologically regarded. The question resolves itself into this: What mental process is associated with the word 'is' or 'are'? What is the state of consciousness when we declare that A *is* B? The fundamental process of mind involved in judgment would seem to be the process by which in a complex conscious state a certain element is fixed upon, analysed out, by the attention, and thus given a greater clearness in consciousness than it had before. We see a flower, a rose; the attention is directed upon the colour element in the total presentation; to our first complex conscious state representing the whole flower, there succeeds one in which the sensation 'white' has assumed a predominance over the other elements, and we express the transition from the first state to the second, the analysis by attention of the sensation 'white' out of the presentation 'rose,' by saying, "The rose *is* white". This is the typical judgment. If the subject is a general or class idea, the act of judgment is constituted by the analysis on the part of attention of the schema, and we say, "The horse is ——" or "Horses are quadrupeds," that part of the schema representing the horse's four legs having assumed prominence in the total mental state. Or, lastly, we have a great many words associated with the name A, in the formula 'A *is* B,' these words being all names of elements which have been discovered in A by some previous attentional analysis, as, for instance, "The rose is exogenous". We might venture this general statement: Except where the judgment is the conclusion of a syllogism, the use of the copula *is* always represents the emergence into greater clearness of one of the elements in a complex conscious state; or else the copula forms part of a verbal formula, a word association, representing such a process of attentional analysis previously performed. The psychological nature of the conclusion of a syllogism will be considered later.

Before passing on to the reasoning process proper, it may be well to see what psychological expression can be given to those venerable principles known as the Laws of Thought, and whether such an expression will constitute a reduction of them from their time-honoured position as ultimates. Let us take first the principle of contradiction: a thing cannot both be and not be. What this statement really says is that the same attribute cannot be at once present and absent in the same subject. A cannot be both

B and not B. Now, by what psychological process should we investigate whether a thing has or has not a given characteristic? Required to find whether a rose is white. There would be two principal elements in one's total conscious state on beginning such an investigation. First, there would be, rather towards the outskirts of consciousness, so to speak, the idea—centrally excited sensation—of white already present; secondly, there would be in the focus of attention the idea or actual perception of the flower. The attention is concentrated on the colour element of the flower. This element either corresponds to, strengthens, the obscure idea of white already present, or it does not. It cannot both correspond and fail to correspond. In psychological terms, then, the law of contradiction will become: In any complex conscious state, the attention cannot both discover and fail to discover the same element. Similarly, the law of excluded middle, A is either B or not B, will become: In any complex conscious state, the attention must either discover or fail to discover the same element. It is obvious that these statements are merely the original laws in a new guise, and I believe that no psychological *explanation* of the laws of thought can be given.

We come at length to the process of syllogistic reasoning. Let us take as an introductory example any ordinary syllogism in Barbara for instance, one whose logical formulation would be: All endogens have parallel-veined leaves: This plant is an endogen: This plant has or will have parallel-veined leaves. The actual mental process corresponding to this formula would be something like the following. The minor term 'this plant' would be present to consciousness either in idea or in actual perception. There would also be a vaguer idea of the major term 'parallel-veined leaves,' which it is required to find in the minor term. As Prof. James puts it, "P overshadows the process from the start". The attention having been directed upon the various distinguishable elements in the minor term, the weak excitation of the major term fails to be strengthened and reinforced: in other words, the major term is not discovered as one of the elements in the minor term. But this process of analysis brings into clearer consciousness certain other elements forming part of the schema which is associated with the word 'endogen'. The minor premise, "This plant is an endogen," would thus express the act of attentional analysis by which the middle term is discovered in the minor term. Notice that in all actual reasoning, the minor premise precedes the major. The schema 'endogen' having thus been brought into consciousness, the element 'parallel-veined leaves' is readily discovered in it by the attention, and we have the major premise, "All endogens have parallel-veined leaves". We may put off considering the conclusion until a few instances of fallacy have been discussed.

First, the fallacy known as 'undistributed middle,' *e.g.*, All sparrows are vertebrates, All birds are vertebrates, All birds are

sparrows. Here again the middle term 'vertebrate' stands for certain elements which the attention analyses out of the total conscious state 'birds'. Now by what process does the schema 'vertebrate' when it has been suggested call up the elements corresponding to 'sparrows'? Obviously not by attentional analysis, but by that case of association where a comparatively simple mental state recalls what was its context on some previous occurrence: the element 'vertebrate' having once formed part of the more complex conscious state 'sparrow' now recalls the latter. But the element 'vertebrate' has formed part of other complex states besides sparrow, for instance, robin, horse. Many of these rise more or less distinctly into consciousness in a kaleidoscopic fashion like that of the individual instances that follow a general word—that is, we think of the other vertebrates which are not sparrows. The difference then between the mental process of the valid syllogism in Barbara and the case of undistributed middle seems to be that while in the former the major term is one of the elements in the more complex conscious state represented by the middle term, and may be analysed out by the attention, in the latter case the middle term suggests the major as part of a complex state suggests the whole. The result is that several such associations occur, each having equal claims on the attention; whenever we have such confusion, that is, whenever the attention is the subject of conflicting claims, there is unpleasant feeling, and the unpleasant feeling thus produced constitutes psychologically the 'wrongness' of the syllogism. There are, of course, arguments where the middle term suggests the major as a part suggesting the whole, but where the shifting associations do not occur because the major term represents the only context in which the middle term is ever found. An instance would be: The metal having an atomic weight of 197 is Au; This metal has an atomic weight of 197; This metal is Au. Here there is no feeling of wrongness, because no other context associations but 'gold' are suggested by the property 'atomic weight 197'.

Secondly, the fallacy called illicit process of the major term. This fallacy, we know, implies a negative word. The following may serve as an example: All Church property is exempt from taxation; This is not Church property; This is therefore not exempt. The mental process here would begin with the presence in consciousness of the idea or actual perception 'this property,' and the idea 'exempt,' which is not directly discoverable in the total 'this property'. 'Exempt' suggests 'church property,' again, as one element of a complex state suggests the whole; again we have other ideas similarly associated, such as 'public school property,' occurring to the mind, and the unpleasantness or wrongness of the process is due to the confused consciousness that there are other kinds of property besides church property which are exempt from taxation. Here, too, there are cases where the middle term is the only known context in which the

major occurs; no other context is suggested, and the feeling of 'wrongness' is not present. For instance, the syllogism would be quite correct if we were to assume as our major premise, "*Only* church property is exempt from taxation".

Take lastly an example of illicit process of the minor term: "The Apaches are fierce; they are Indians, therefore all Indians are fierce". "No," we say at once, "there are other Indians besides Apaches." Here the minor term, with which the psychological process always begins, has suggested the middle term because the characteristics represented by the word 'Indian' are elements in the total state 'Apache,' being also, however, elements in other complex states which at once occur to the mind.

We find, in short, that in each one of the chief logical fallacies the objectionable point in the total mental process is that either the middle term suggests the major, or the major the middle, or the minor the middle, by that form of association in which a part reproduces the whole, and where other similarly related ideas are also suggested, tending to cause the unpleasant feeling which always accompanies mental confusion, a distraction of the attention in several different directions. The only cases of argument where this does not happen are two: either the association of whole with part does not occur in the total mental process, the middle term being found in the minor by attentional analysis, and the major being similarly analysed out of the middle term, as in any syllogism in Barbara; or the association between part and whole does occur, but is an invariable, a fixed association, the case of an element suggesting the only context in which it is ever found. How then shall we describe the mental process resulting in a judgment concluded from a syllogism? Somewhat like this: The verbal formula A is B may mean that B has been discovered as one of the elements in a more complex mental state, the middle term, which is itself analysable out of A; or it may mean that A has suggested by an invariable association of part with whole a context in which B is contained as an element; or, lastly, that some element discoverable in A is thus associated with B. It is always to be remembered that the whole reasoning process may and most frequently does take place entirely by means of word associations. Thus, very often, instead of discovering 'vertebrate' in 'bird' by attentional analysis, we simply recall the phrase "Birds are vertebrates"; instead of having the general idea 'Apache' suggested by 'Indian,' the words "Apaches are Indians" occur to the mind. But the original process out of which these word associations have grown is certainly something like what has just been described. The unpleasant feeling of the wrongness of a syllogism has become, too, by emotional transference, attached to the *form* of the mental process which constitutes a fallacious syllogism, and may be aroused when the conflicting associations are not in themselves strong enough

to produce the unpleasantness of confusion. Further, when a fallacy is written in technical form on the blackboard and recognised by the student, the process is quite different; and probably consists merely in calling up by the look of the sentences the word 'wrong' and the name of the appropriate fallacy, the word 'wrong' being itself unpleasantly toned. That the unpleasantness of a logically wrong syllogism originates, however, in the unpleasantness of confusion has been confirmed to the writer's satisfaction by questions put to students untrained in logic. Their vague recognition of the incorrectness of such an argument as that about the Apaches always resolves itself into the thought of the Indians who are not Apaches.

MARGARET WASHBURN.

V.—CRITICAL NOTICES.

Social and Ethical Interpretations in Mental Development: a Study in Social Psychology. By Prof. J. M. BALDWIN. New York: Macmillan & Co., 1897. Pp. xiv., 574.

THERE is no doubt that in this book we have a valuable contribution towards the literature of a problem which may perhaps be considered *the* problem of the age—the problem, that is, of the relation between the individual and society. Unfortunately Prof. Baldwin has published his work in a form in which it is difficult for the reviewer to do justice to it. The book consists neither of a series of essays, each one of which could be considered on its own merits; nor yet is it such a consecutive development of a subject as can be followed and treated as one argument. Part of it is quoted from a previous book, part consists of reprinted articles, and part of an essay written for the Royal Academy of Denmark. These various parts form chapters amongst a good many others which are presumably new in their present form, and intended to serve as connecting links. The result is inevitably a certain amount of incoherency, which makes it difficult to give an adequately reasoned account of the contents of the book.

But the ideas with which Prof. Baldwin deals are so well worth considering, and in many cases so well considered, that perhaps the best way of attracting the reader will be to take some of them as they are given, more or less disconnectedly, and try to indicate the author's views upon each.

Perhaps the fundamental idea, as well as the most successfully established, is that of the nature of society. Much has been said and written about the analogy of society to an organism; but the truer analogy is that of a psychological organisation. This has of course been said before; Prof. Giddings has urged that a society is something as much higher and more complex than an organism as an organism is higher and more complex than inorganic matter, that it is an organisation, a complex of psychical relations; and Plato explained the organisation of a society by reference to the organisation of the soul. But it is a point which needs emphasising in face of the tendency to explain higher phenomena by lower, and to reduce all explanation to the type of physical causation.

Society then is analogous to a psychological organisation. But social organisation may be regarded also as a process, and the

twofold question arises: What is it which is organised, and how is it done? In Prof. Baldwin's words, what is (1) the *matter*, and (2) the *functional method* of organisation of the given matter.

The answer to the first half of the question is that "the matter of social organisation consists of thoughts; by which is meant all sorts of intellectual states, such as imaginations, knowledges, and informations". This matter has its origin in the mind of individuals, and becomes social when generalised by communication to the minds of other individuals. So far the author claims the support of Hegel; but he claims also that in his answer to the second half of the question he supplies a link which is lacking to Hegel, "the bridge from the private thought to the public thought".

That answer he finds in the "*imitative process*" so popular just now in France and America. "Society grows by imitative generalisation of the thoughts of individuals." But other supporters of the imitation theory it would seem have failed to give a complete explanation of society because they have neglected to say what it is which is *imitable;* so that it has been reserved for Prof. Baldwin to bring together the two aspects of the question and find their complete answer.

This is not the place to enter upon a criticism of the imitation theory, with all which is implied and omitted in it; but accepting for the moment the position that the matter of social organisation is exclusively "thoughts," it is fair to ask whether these thoughts must not in their organisation obey the laws of "thought" in general. No doubt there is an element which may be called imitation in the way in which individuals receive the thoughts one from another, but that is another thing. The point may be illustrated by the action of a committee in the development of some definite piece of work; each member is present with a certain situation in his mind, which has got there—say by a process including a certain amount of imitation. The situation is then developed by suggestions, which are accepted or rejected according as they can be shown to be organisable, appropriate, capable of developing it; the imitation in this process, if there is any, lies only in the way these suggestions pass from mind to mind, and is present just as much in the rejected as in the accepted suggestions. But the truly organising function is found when the appropriate suggestions become a part of the situation, modifying and developing it; and it is these thoughts alone which survive and become a part of the social matter. In other words, the organisation of thought is not the same thing, even in the individual mind, as the process by which individuals receive communications from others; still less is it the same thing on the higher level of social life.

The first chapter on the "Self-Conscious Person" is an interesting account of the growth of the self. The play between the Ego and the Alter, the mutual response and "imitation," the interpretation of my self by what I see in you, and of your self by what I know in me, all this gives rise to the formation of an idea of Self

which is really identical in Ego and Alter, and to which Prof. Baldwin gives the name of the Socius. This common element or Socius is essentially social; it has its origin in the play of "imitation" between individuals, and is the unit from which society is built up; and inasmuch as every self is such a Socius, compounded of both *ego* and *alter*, we get the welcome conclusion that altruistic sentiments are every bit as rational and natural as egoistic. The difficulty which strikes us about this treatment is only, that in the desire to press to its uttermost the theory of imitation, the social element in the self is made to assume a derivative aspect; as if human beings were originally indifferent atoms in which the social element must be superinduced. This point of view comes out in the treatment of play; both in the child and in primitive man. Take the following quotation: "Primitive man, we are told, indulged to a remarkable extent in games, dances, amusements of a co-operative character". We should expect that the commentator, who was really convinced of the essential sociality of man, would point to this as a proof of it, and are taken aback when we go on to read: "This must have been a constant training to him in the benefits of sociality," as if sociality were something alien to him which he had to be taught to like. In the same way the play of children, instead of being dwelt upon as proof of their social nature, is mainly treated as giving the child a constant opportunity for imitative learning and invention. It is, of course, mainly a question of emphasis; both aspects are present in the phenomena of play; but we should have expected a writer who occupies Prof. Baldwin's position on the fundamental issue to have emphasised the aspect of solidarity as against that of atomism, had it not been for the claims of "Imitation".

I find a difficulty again in accepting Prof. Baldwin's principle of Social Heredity as he presents it. The whole chapter on "The Social Person" is excellent in so far as it is descriptive of the way in which the individual enters into his social inheritance of knowledge. But "heredity" is generally used as a technical term, definitely opposed to "acquirement," and it seems inconvenient to obliterate the distinction; "let us call this general fact, that in much of his personal growth he is indebted to society, the fact of 'Social Heredity,'" writes Prof. Baldwin. But why? It is not enough to say that the child learns to speak, write, read, etc., "just as well as if he had received an instinct for that activity at birth from his father and mother". It may do "just as well" to acquire as to inherit; but that does not alter the distinction between acquirement and heredity. Moreover, insistence on this point seems to force Prof. Baldwin into the awkward position of attributing all crime to physical heredity alone, perhaps the most pessimistic utterance that has ever yet been made in criminology. If Social Heredity is really as inevitable as physical heredity (see p. 60) it would be difficult to get over the contradiction involved in society repressing by punishment or annihilation the forms of

consciousness necessarily developed by it. But the picture we are given of the man born with tendencies which lead him to commit crime, when given as an exclusive—or indeed a principal—account of the origin of crime, sounds very unreal when we remember to what a large extent crime is a matter of education. Take this sentence from the work of an expert in criminology: "In this country the criminal calling does not descend in the majority of cases from father to son. It descends by apprenticeship, and not, as a rule, by parenthood."[1] In other words, crime is acquired, not inherited; and just for this reason it is not inevitable.

We do not feel satisfied, again, that Prof. Baldwin has shown sufficient reason for extending the meaning of the technical term "Sanction" to cover every cause of action. "A sanction," he defines, "is any ground or reason which is adequate to initiate action, whether the actor be conscious or not that this is the ground or reason of the resulting action." This looks like the last step in the degradation of a term which began with a quite definite meaning of its own, and has had a very interesting history. "A sanction properly so called," writes Austin, "is an evil annexed to a command." Bentham began the confusion by extending it to include *physical sanctions*, and Mill carried it further. Austin's protest against Bentham seems in place here: "By the term *sanction*, as it is now restricted, the evils enforcing compliance with laws imperative and proper, or with the closely analogous laws which opinion sets or imposes, are distinguished from other evils briefly and commodiously. If the term were commonly extended to these physical or natural evils, this advantage would be lost. The term would then comprehend every possible evil which a man may bring upon himself by his own voluntary conduct. The term would then comprehend every contingent evil which can work on the will or desires as a motive to action or forbearance." The confusion has now been carried to an extent which those who began it would themselves have repudiated; and it seems only fair that those who have stolen the term for their own purposes should provide another at least equally "brief and commodious" to do the work it used to do.

Perhaps the most original chapters in the book are those which deal with the attempt to solve the two problems "whether the child's mental development recapitulates the stages of mental development in the animal world, and second, whether it then goes on to show, or to recapitulate, the stages through which the human mind, after it arose in history, has passed in our race development". This application of the conception of phylogenesis in the psychical world seems beset with difficulties, owing to the very hypothetical nature of the terms of the comparison. In the physiological world there are, at any rate, definite tangible facts present upon which to base a theory; but in dealing with states

[1] Morrison, *Juvenile Offenders*.

of mind so elementary that they have never taken shape in institutions of any kind we are dealing with very uncertain factors. The child's mental development is itself very hypothetical, we can only interpret it, and no one but the child could say how often we misinterpret it. Mental development in the animal world is still more hypothetical; and the earlier stages through which the human mind has passed are hardly less so. Is there, for instance, any sufficient reason for the hypothesis that the first state of humanity was one of universal hostility, and that only at a later stage did the possibility of living at peace with his fellows occur to man? (p. 214). But the difficulties of the subject only serve to make this chapter the more suggestive and interesting, and it is perhaps too soon as yet to expect any very definite result in this direction.

We have only been able to touch upon a few of the many subjects dealt with by Prof. Baldwin; for the remainder we must refer readers to the book itself, recommending especially the sections on Social Emotion and the Theory of Mob-Action, which seem to us an excellent summary and criticism of this new branch of psychological inquiry.

HELEN BOSANQUET.

Practical Ethics; a Collection of Addresses and Essays. By HENRY SIDGWICK, Knightbridge Professor of Moral Philosophy in the University of Cambridge. "The Ethical Library." London: Swan Sonnenschein & Co., Ltd., 1898. Pp. viii., 260.

"THE greater part of the present volume consists of addresses delivered before one or other of the Ethical Societies that were founded some ten years ago in London and Cambridge." These addresses, with one exception, have already appeared in the *International Journal of Ethics;* they are here supplemented by four other papers on kindred subjects, some of which are now published for the first time. "Practical Ethics," as here understood and exemplified, is identical with Casuistry—in denotation if not in connotation. It is the discussion of what is right and what is wrong in such matters as the conduct of war, the breaking and keeping of treaties, religious conformity, luxury. Since Pascal attacked the Jesuit doctrine of "Probabilism," Casuistry has had an evil reputation outside certain theological circles. But a distinction should surely be recognised between manuals for spiritual directors which profess to settle the minutiæ of conduct on the authority of sacred texts interpreted by ecclesiastical doctors—doctors who often differ, as the proverb says—and the discussion on grounds of social utility of the general principles according to which accepted moral ideas are to be applied in

practice to special cases. Few, if any, reflective moralists would now accept that crude type of intuitionism or "common sense" ethics, according to which the plain man's conscience guides him rightly in every particular case—an opinion which may be regarded as the extreme of Protestant individualism applied to conduct, "Every man his own Pope and every man infallible"—an opinion which, if seriously taken, would make, not only moral philosophy, but morality impossible. But unless we accept such an individualistic theory of conscience, we must admit the legitimacy of a discussion of the question, "how far, in the particular circumstances of certain classes of persons, the common good demands a special interpretation or modification of some generally accepted moral rule" (p. 18). And in this sense Casuistry must continue to form a part of any complete treatment of Ethics. Mr. F. H. Bradley has been too hasty in burying and singing the elegy both of casuistry and of the practical use of the syllogistic logic in testing reasonings (*Logic*, p. 247). The moralist cannot provide every one with a ready-made guide to conduct in every detail, any more than the logician can provide an art of reasoning which will serve as an instrument for discovering truth; but, whether the ethical end be defined as "perfection of character," or as "self-realisation," or as "the general good," or as "the greatest happiness of the greatest number," or as "the efficiency of the social organism," the moralist may fairly be expected to show how his principle will apply to the solution of difficult cases of conscience. Of course the solution cannot be absolutely precise and definite—that would require detailed knowledge of the minutest particulars of every individual case. This is unattainable; and so the solution is only an assertion of what is true ὡς ἐπὶ τὸ πολύ, as Aristotle says and as Prof. Sidgwick means, I think, to recognise (*e.g.* on p. 16) when he points out that the work of an ethical society must lie in the region of "middle axioms," not descending to the particulars of individual conduct nor (for to this other limitation he also holds) rising to the discussion of ultimate philosophical principles. Referring in a most interesting passage to his own experience of "the Metaphysical Society" (pp. 2-4), Prof. Sidgwick argues that philosophical discussion, whatever good social effects it may have, is not likely to lead to intellectual agreement, and that a society dealing with problems of practical ethics should not attempt to "get to the bottom of things". It is quite true that a general agreement in practical principles may be found among the adherents of different systems of moral philosophy, when they are dealing with immediate practical decisions on matters of political, or social, or personal duty; but when any really serious discussion of difficult problems begins, is it possible to keep entirely off philosophical questions, and is not such discussion just the most valuable means of testing the truth of different ethical theories, as Prof. Sidgwick practically acknowledges by much of his own procedure in the *Methods of Ethics*?

How far any one can carry on ethical discussion apart from philosophical controversy is probably very much a matter of temperament and early training. Some persons can move serenely all their lives among "middle axioms" and are not keenly sensitive to intellectual contradictions; others, often without due preparation, insist on digging down to "fundamentals".

Prof. Sidgwick himself has throughout his discussions assumed, just as he did in his *Elements of Politics*, the ethical doctrine of his *Methods of Ethics*. Fortunately, Utilitarianism of this broad type comes in most matters sufficiently near to the ethics of evolution, or to a doctrine like that of Green which identifies self-realisation with the common good, to make it serve as a convenient basis for practical discussion. But there seem to be some matters where the philosophical basis makes a considerable difference. One of the papers in the volume before us which has most philosophical interest is that on "Public Morality," by which is here meant "prevalent opinions as to right and wrong in public conduct; that is, primarily in the conduct of governments—whether in relation to the members of the states governed, or in dealings with other states" (p. 53). Prof. Sidgwick quotes from a German writer what he calls the "Neo-Machiavellian" utterances: "The state is self-sufficient. . . . Self-devotion is the principle for the individual, self-assertion for the state. . . . The maintenance of the state justifies every sacrifice and is superior to every moral rule" (pp. 64, 65). Now this particular German appears to be under the influence of the patriotic intoxication produced (naturally enough) in so many of his countrymen by the war of 1870 and the realisation of a united German Empire: and his words are a little wild. But do they not admit of a sane interpretation, if we take a sufficiently wide conception of "the state"? "I have never seen," says Prof. Sidgwick, "nor can I conceive any ethical reasoning that will provide even a plausible basis for the compound proposition that a man is bound to sacrifice his private interest to that of the group of human beings constituting his state, but that neither he nor they are under any similar obligation to the rest of mankind" (p. 68). In this sentence Prof. Sidgwick seems to be assuming as indisputable the Benthamist doctrine which takes for granted that all mankind are to be reckoned as equal units in our moral judgments. This is a philosophical dogma which may conceivably be defended as the truest and highest; but it has certainly never been the real practical maxim of any considerable number of human beings. It can hardly be counted among the "middle axioms" which ordinarily guide conduct. Conscience in its origin is the tribal-self, the clan-self, the family-self: that it should become the national-self or the state-self means an enormous step in human progress. Only a few philosophers here and there (such as the Cynics) and a few anarchists, religious or otherwise, have actually worked with the idea of the brotherhood and equality of all man-

kind, regarding their kinsmen and countrymen as much, or as little, as they regarded the Hyperboreans or the Hypernotians. "Humanity at large," so far as it has actually determined ethical judgments, has meant all civilised nations or all Christian nations, though it often means practically only those nations and those social classes to which the individual using the expression belongs. When "*Quod semper, quod ubique, quod ab omnibus*" is used, either as an ecclesiastical or as an ethical rule, it will generally be found that the *omnibus* contains a very limited number of persons, compared with the whole human race or even with all the Christian churches. When uncivilised peoples are taken account of, they are considered as dependent upon, or under the control of, civilised peoples. The general happiness of all human beings cannot serve as the standard of international or of individual conduct, except in so far as we have before us some ideal, however vague, of a world-state, of some federation of mankind, or of a really universal Church. It seems to me that the standard which Prof. Sidgwick accepts, "the general happiness of all the human beings concerned," can only guide us if it is interpreted in terms of the ideal of "a universal political order" which he puts aside as "beyond the range of practical effort" (see *Elements of Politics*, chap. xv., p. 228)—unless, indeed, we are to lay such stress on the words "all *concerned*" and "*practical* effort" as to narrow down the standard so that it falls far short of the "well-being of humanity at large—or, rather, of the whole universe of living things, so far as any practical issue can be raised between these two conceptions of the universal end" (*Practical Ethics*, p. 63). When it is said that the efficiency of the social organism or the welfare of the state is the standard of right conduct, we have still to determine *which* organism, *which* state. A good man may conceivably acquiesce in the extinction of his state, but only if it is being merged or altered into some state more highly developed and more capable of supplying him with the proper social environment in which to realise himself. The common good which can serve as an ethical standard must be the good of a community that can at least be thought of, not the good of an indefinite number of individuals of all kindreds and tongues (including or excluding the unborn, including or excluding monkeys, pigs, tigers, etc.) whose often competing interests have to be added up and balanced by some marvellous moral arithmetic. You can ask men to die for their country, and thousands will readily answer to this call of duty; but you will rouse little enthusiasm or comprehension, if you tell them, that they are under an obligation to sacrifice their private interests in order that $x + 1$ sentient beings may enjoy $y + 1$ pleasures of an average intensity of $z + 1$ (whatever unit of measurement the ethical psychologist may manage to adopt) rather than that x sentient beings should enjoy y pleasures of an average intensity of z; and such is a very simple case of the Benthamist formula. Of course it is impossible to discuss the

fundamental ethical problem here: I only raise it in illustration of the opinion that even Prof. Sidgwick's cautious statement of "middle axioms" does not always conceal the philosophical difficulties lying close behind them. I do not see how we can seriously discuss the question of the ethical limits of patriotism without going on to consider the question, "What is the chief end of man?"

If I am not mistaken, those who first instituted the Ethical Societies in America and introduced them into England intended them to be in the main non-theological churches. In England they have tended on the whole to become more educational and philosophical in character, their object being rather to seek to benefit their members and others by more care in thinking out what is right and what is true than by endeavouring to supply motives for vigorous action to persons who suppose themselves already to know perfectly well what they ought to do. While certainly keeping both aims in view, they have striven to supply light rather than warmth in the region of conduct. Prof. Sidgwick in these addresses seems to encourage this intellectual tendency. He appears to a great extent in the *rôle* of Socrates, asking various puzzling questions and showing that many precepts commonly taken for granted need inquiry and discussion. It is easy for the ardent preacher to say, "All war is wrong," "All luxury is wrong," "When a man ceases to hold any one of the essential doctrines of the creed [it is usually assumed that every one is agreed on what is 'essential'!], he ought to withdraw from the Church". It is more difficult, more profitable, and more necessary to discuss the limits within which arbitration can be applied to the settlement of international disputes, the value for civilisation of many things which are not necessary for the maintenance or even for the immediate social efficiency of human life, the reasonable amount of laxity with which ancient documents can now be honestly accepted as the bonds of religious association. Prof. Sidgwick's lecture on "The Ethics of Religious Conformity" called forth a very striking paper from Mr. Rashdall in the *International Journal of Ethics* (Jan., 1897): and to this Prof. Sidgwick now replies in a paper on "Clerical Veracity"—here printed for the first time. The discussion is of extreme interest, but a consideration of it would be out of place in the pages of MIND.

The last essay in the volume, as Prof. Sidgwick tells us, was written primarily from a psychological rather than from a practical point of view. It is entitled "Unreasonable Action"[1] and is a brief consideration of a subject little noticed in ethical and psychological treatises since the discussion of it is the Seventh Book of the *Nicomachean Ethics*—the question of *ἀκρασία*, or how people can act contrary to their practical judgment of what they ought to

[1] First published in MIND, N.S., vol. ii., No. 6.

do. "I mean action," says Prof. Sidgwick, "not *objectively* but *subjectively* unreasonable; *i.e.*, not action which is contrary to *sound* judgment, but action which is done in conscious opposition to the practical judgment of the agent at the time" (p. 236). Is it not necessary to ask here what degree and kind of consciousness is meant and with what precise strictness "at the time" is to be taken? Prof. Sidgwick's conclusion is "that—in the case of reflective persons—a *clear* consciousness that an act is what ought not to be done, accompanying a voluntary determination to do it, is a comparatively rare phenomenon" (p. 253). Still it does occur; but such "pure undisguised wilfulness" in the case of habitually reflective persons "more often takes place in the case of negative action, non-performance of known duty" (p. 259). Such cases are distinguished from those "(1) in which there is at the time no consciousness at all of a conflict between volition and practical judgment; and (2) cases in which such consciousness is present, but only obscurely present" (p. 253). It is difficult to discuss the question briefly and in so abstract a form; but it certainly needs more discussion than it has yet received. So far as I can judge, Aristotle made the most important contribution to the solution of the problem, not so much by his distinction between the minor and major premise in the practical syllogism, to which distinction Prof. Sidgwick expressly refers on p. 254—this is only a preliminary part of his solution—but (1) by insisting on the difference between mere intellectual consciousness or mere formal acceptance of a maxim of conduct and the inherence of it in a person as a part of the self (δεῖ γὰρ συμφῦναι); (2) by urging that intellect alone is not an efficient cause: there must be desire present to make principles operative; and (3) by getting completely beyond the Platonic antithesis (an antithesis still accepted, in words at least, by most practical moralists) between reason and passion or desire, and by showing that even unreasonable action (in the sense of action which the calm reason of the person himself condemns) has its maxims. If I am right in the interpretation which I put on the Aristotelian solution (see MIND, N.S., vol. vi., No. 24), it only needs to be supplemented by a more careful statement of the nature of consciousness to make the *theoretical* difficulty of "unreasonable action" disappear altogether. Our consciousness is never completely "clear". It is not all occupied at any given moment with one idea, nor can the consciousness of one moment be abruptly separated from that of the previous moment. As recent psychologists put it, consciousness is not a series of ideas and feelings, but a stream with waves, in which (to change the metaphor) an idea or feeling may sometimes be marginal and sometimes focal. Even habitually reflective and well-disciplined persons have not their minds entirely occupied with a fixed and coherent set of moral principles. There are odd and incongruous maxims floating about—scum which has risen from the morally lower parts of the social environment, or in-

stincts surviving from the ape and the tiger, which an older generation would have explained easily as direct suggestions of the devil; and these may happen to come into focus, to rise to the crest of the wave at the moment of action, and so lead to a departure from what the agent himself, not only in calmer moments, but even then in the central current of his mind, considers "reasonable conduct". The exceptional case to which Prof. Sidgwick narrows down the problem seems capable of explanation on principles similar to those which Aristotle employs and which Prof. Sidgwick himself uses in the easier cases of "unreasonable action". It seems to me that all voluntary action is at the moment chosen *sub ratione boni.* Reason and desire are not absolutely opposed, for all volition involves both. To take the very illustration used by Plato (*Rep.*, iv., 439 *e*) in his argument for the distinction of mental faculties (I am not referring to the precise purpose for which Plato uses it, which is the distinction between *θυμός* and *ἐπιθυμία*): The man, who has an inclination to look at the dead bodies and yet thinks he ought not to do so, has two maxims floating in his mind, "Morbid tastes are to be repelled" and "All experience is interesting". The latter maxim is not *per se* bad, but only if it comes into conflict with a better.

May we express a hope that Prof. Sidgwick will find occasion to treat more fully this question of ethical psychology, as well as to extend his specimens of reasonable and useful casuistry?

D. G. RITCHIE.

Hallucinations and Illusions: A Study of the Fallacies of Perception. By EDMUND PARISH. London: Walter Scott, 1897. "Contemporary Science Series." Pp. xiv., 390.

IN *Hallucinations and Illusions* Mr. Edmund Parish presents a scholarly study of an important problem. This study, he tells us, grew out of an examination of the International Census of Waking Hallucinations in the Sane. In the English edition—the German is four years old—he has added new matter and recast certain chapters. The book may now be characterised as a sustained effort to set forth, in the light of the most recent psychical and neurological researches, the "common organic principle which, under whatever diversity of conditions, underlies alike normal and fallacious perception". Every leading proposition of the book lies in a matrix of carefully collated authorities. There is nothing vague, timid or unjustified. From definition to conclusion, the exposition is an orderly sequence of relevant considerations. As a result, Mr. Parish's book is at once an important contribution to the psychology of perception and an admirable introduction to the theory of insanity. Henceforward the student of hallucinations

and illusions—that ancient battle-ground of futile distinctions—will do well to begin here and work backwards. He will find the profit of following a well-considered generalisation through a vast amount of detail. This generalisation is—that Dissociation of Consciousness is the condition precedent of all forms of fallacious perception. Dissociation—psychological and physiological—offers a scientific formula for every variety of hallucination and illusion. It leaves the detailed determination of causes to the practical alienist. If this generalisation can be substantiated, it will constitute a formidable instrument in the criticism of new researches. Even if it is not demonstrated, it will, as the sequel shows, form a good guiding hypothesis.

In chapter i., Mr. Parish distinguishes "sensory" delusions, where the subject believes he sees or hears something, from "mental," where imagination alone is concerned. He excludes the "universal fallacies of perception," such as the progressively altering size of the rising moon. He enumerates typical forms of illusion, as the phantom leg after amputation, or delusions due to ambiguity of stimuli. The parts commonly assigned to "imagination" and "sense," he reconciles by iteration of Gurney's statement that "all sense perception is ultimately a psychical phenomenon". "Hallucination is perception without an object." The originating cause is of no consequence. "Whether I hallucinate with eyes closed or open, whether I see distinct and vivid images or dim floating shapes, is a matter of no importance" (p. 17). Sane or insane, waking or sleeping, spontaneous or experimental, hallucinations are all equally fallacious perceptions. This term, it is true, implies a theory, but the theory has much evidence behind it, and the term indicates a definite relation to established doctrine. The concomitant physiological process of hallucinatory perception may not always depend on similar conditions of brain, but it probably "rests on analogous functional principles" (p. 17).

Before attacking this physiological problem, Mr. Parish, in chapter ii., analyses more in detail the various pathological and physiological conditions of fallacious perception. He grasps into one concept the delusions of insanity, epilepsy, hysteria, ecstasy, alcohol and other drugs, bodily diseases, dreams, hypnotism and crystal gazing. "Obstructed association is indicated in almost every case" (p. 71). In this the author is in general accord with the standard teaching, as, for instance, in Mr. Bevan Lewis's *Mental Diseases*. The novelty is in the mode of demonstrating how obstructed association serves to establish continuity between the normal and the insane. Even in mania, where the "on-rush of ideas" appears swifter than normal, the appearance is due to the increased flow of verbal images, and this, in turn, to impeded association (p. 72). One has only to watch the muttering delirium of a typhus patient to see that verbal facility may be a symptom of partial cerebral exhaustion. And so through other

instances. Dissociation varies in form and degree. It may even simulate the "waking" state (p. 75). In this chapter, I may single out the treatment of dreams (p. 50), of the hypnotic parallelism to dreams (p. 57), and of crystal vision (p. 63).

In chapter iii., Mr. Parish applies the notion of dissociation to the massed materials of the International Census. He concludes that the percentage of positive cases is too high to be representative. On the other hand, it is too low to be reliable. The inquiry is too little "intensive"; that is, the details per case are too few for criticism. Then, the returns are in danger of proving too much. For instance, if the "state of consciousness" (p. 90) is accurately recorded as "complete wakefulness," the number of hallucinations is found to be 38 per cent. more than in the borderland between sleeping and waking,—precisely the state known to be most favourable to hallucinations. But in the well-recorded cases, Mr. Parish finds indirect and unintended evidence of dissociation. Besides the moment of waking—notoriously a moment of delusion—there are suggestion (p. 94), fixation of the eyes (p. 95), prolonged reading (p. 98), sewing (p. 97),—all of them capable of causing dissociation. To discuss all the points raised in this chapter would be out of proportion. It is enough to say that the memory factor is shown to be more important than the returns, on the face of them, bear, and that the lapse of time between record and incident seriously impairs the value of the observations. The second point seems to me fatal to a great many cases that yet receive the same consideration as those strictly observed and recorded on the spot. In the non-coincidental cases, the objection is less; but, in the cases where sequence or simultaneity is everything essential, lapse of time means the evanescence of the psychological context and with it the possibility of verification. To judge by the enormous difficulties even of objective observation of sequences, a ghost story ten years old might, to my mind, as well be a thousand. And this apart from another fundamental consideration, that many observers indicate their doubtful competence by their indirect admission that the hallucination is the only experience they have had of the kind. Either hallucination is understood in a very restricted sense or the implications of the admission are completely unconsidered. It may be taken as almost certain that only from bad self-observation can a man say that a full-blown hallucination is his only experience of the kind. He is not thinking of dreams, or after-images, or of other innumerable gradations between normal and fallacious perception.

So far the fact and its probable nature. In chapter iv., Mr. Parish discusses the physiological processes in fallacious perception. The chapter is full of controversial neurology and the argument is not all on one side. After rejecting many varieties of centrifugal theories, Mr. Parish returns to the earlier—and later—hypothesis that the "cortical elements concerned in perception

and ideation are identical" (p. 142). [The term "element," which emphasises the inter-relation of cortical systems, is preferable, as a rule, to the term "centre," which, though sufficient for practical ends, over-emphasises the *locus*.] On the basis of his assumption, Mr. Parish designs a simple nerve-schema that fits hallucinations, illusions and other forms of dissociation. A sensory stimulus S produces in cortical centre A a process *a* This process *a* irradiates, by association fibres, to other centres "actively associated with A," producing in these the processes a^1, a^2, a^3. If, however, the association fibres are "blocked," the irradiation of process *a* will, following the line of least resistance, affect other centres B, C, D, normally acting, not with centre A, but with centre N, which for the present is assumed to be inactive. The centres B, C, D, thus roused by an unusual stimulus, functionate as if stimulated from their usual centre, N. The result is what I may term a "virtual perception," that is, a hallucination. The schema for an illusion is simpler. If the sensory stimuli are too feeble to cause irradiation from centre A, then the process *a* is deprived of its normal accompaniment of other processes. The result is an abortive perception, that is, an illusion. In hallucination, the stimulus rouses the wrong department; in illusion, the stimulus fails to get beyond the court of first instance. Thus a hallucination is a perception without its normal sensory object; an illusion is a perception uncorrected by its normal central concomitants. In illusions, certain processes are suppressed; in hallucinations, associations are forced. Thus Mr. Parish succeeds in representing every factor in the problem, and at the same time reduces "all false perception to a single physiological type—Esquirol's illusions" (p. 149).

In chapter v., Mr. Parish expounds in detail the factors of fallacious perception. Any condition that releases an element of the nervous grouping from its "compact system" and permits the irradiation of its energies in unused channels results in dissociation, which thus assumes an unlimited variety of forms. For instance, the elements concerned in organic sensations discharge freely into each other; but let an element loose, and there ensues dissociation. No stimulus by itself will produce hallucination; but when a stimulus co-operates with the blocked nervous machinery, hallucination inevitably follows. We have already seen some causes of dissociation. In this chapter, we have illustrations ranging from after-images—the *débris* of sensation—to the fixed hallucinations of melancholia. Undoubtedly, Mr. Parish handles his generalisation with striking effect. From this we pass naturally to the content of fallacious perception (chap. vi.). The main fact emphasised here is that only what passes in through the senses can be reproduced as hallucination. For instance, the blind from birth have not even the "ghost of an idea of light and darkness," and consequently can have no visual hallucinations (p. 186). Practically, this proposition may be

taken as true; but theoretically, it seems to me a surrender of the inter-association of centres. If we are to assume that the nervous apparatus of vision, in particular the cortical centres, are fully developed, one hesitates to believe, on negative evidence alone, that by no conceivable stimulus could the cortical centres be roused into producing a hallucination even of light. I speak, of course, of the case where the retina is more or less intact, but where the refractive media of the eye are completely opaque to light. If we are to accept Mr. Parish's theory that a centre may be stimulated from other centres not usually acting with it, we must allow the possibility of stimulating, not per sense but per centre, the latent visual centres. Otherwise we must accept the proposition that no cortical centre can be made to begin functioning except through the channel of sense. No doubt it would be difficult to prove the contrary, as it was difficult to prove the electrical excitability of the motor centres, and practically, as I have said, the proposition is true. Many other interesting points in this chapter, in particular "*rapport*" (p. 204) and "negative hallucinations," must go unnoticed.

In chapter vii., we have an account of "reflex hallucinations," the classical instance being "coloured hearing". Many theories are offered of this striking experience, but not one is entirely satisfactory. Except that the "colour" has not been consciously experienced in association with sounds, I find some difficulty in perceiving any real difference between this problem and the problem raised when a spoken word instantly induces a visual coloured image. And it is admitted that the minor instances of the phenomenon may be accounted for by ordinary association (p. 228). Perhaps the most important point in the chapter is the extended meaning given to the "*point de repère*," which must be taken to include any "sensory impression" that may act as a mental cue, and not merely an irritation of a particular sense, or an objective point. It seems to me that too little has been made of the *muscæ volitantes* and the retinal vessels as "*points de repère*". They offer a ready nucleus for moving hallucinations, when figures approach and recede (Gurney: MIND, x., 178).

In chapter viii., perhaps the most striking piece of analysis is the explanation of "audible thinking". This, according to Mr. Parish, is due to slight articulatory movements resulting from central innervation. If the movements are unnoticed, as the movements of the eye are, and yet the voice is heard, the result is a hallucination of an objective voice. This theory has much to support it, and the hypnotic experiment recorded at the end of the chapter makes it all the more convincing. Automatic speech, such as is here concerned, presumes dissociation or "splintering off" (p. 271).

Chapter ix.—telepathic hallucinations—is a searching examination of the fundamental principles involved in "Phantasms of the Living". The chapter must be taken in connection with the

criticism of waking hallucinations, of which the telepathic cases are special instances. Here again Mr. Parish applies his theory of dissociation. But he has some primary objections. The question of "chance" is fundamental to the method of the investigation. To those accustomed to handle statistics, the temptation to infer causation from a few coincidences is ever present; but the stronger the temptation the more necessary is the intensive analysis of the correlated occurrences. And Mr. Parish maintains, as in the former chapter, that the analysis is too little intensive. Then, is telepathic agency a *vera causa*, or only a hypothesis required by the figures? Are the hallucinations "veridical"? That is, does their content adequately correspond to the fact assumed to be represented? Mr. Parish gives many reasons for doubting the "veridicality" in all the cases (p. 276). As discounting the records, he again emphasises the memory fallacy, the identifying fallacy, the adaptation of correspondence after the fact, and the like. These considerations, if in the charm of the new hypothesis they were not sufficiently allowed for, were doubtless present to the minds of the investigators. A more damaging fact is the dwindling percentage of positive cases as the time of occurrence approaches the time of record. His explanation of this fact seems to me nearer the truth than that afforded by telepathy. "Thus there is nothing for it but to explain the circumstance that the proportion of veridical hallucinations reported as occurring more than ten years ago, is nine times as great as the proportion occurring within the last five years, as indicating that such striking experiences continue to be remembered when a multitude of other hallucinations have passed out of mind. To compare the coincidental and non-coincidental hallucinations is to compare the incomparable, and the attempt must be abandoned as at the outset fruitless" (p. 289). The remarks already made on "waking hallucinations" apply with even greater force to the alleged telepathic cases; for here the essence of the case is causal coincidence of hallucination and objective occurrence: not the mere psychological occurrence itself. If the telepathic hypothesis is to lie, it must exclude all that is due to association, to community of experiences, to what I may name the "mental venue" of the telepathic correlates, to suggestion. The Psychical Research Society endeavours to exclude these factors. But, in the light of what we have already accepted, namely, the identical nature of waking and dreaming hallucination, their exclusion is almost impossible. And that they certainly are not excluded in every case Mr. Parish shows by an analysis of several cases (pp. 293-4). In these he discovers further proof of dissociation. The matter of coincidence seems to me completely altered if dreams and waking hallucinations are to be taken as of the same order and due to similar psycho-physical conditions. If telepathic agency were an established fact, the analysis of the coincidences would be a relatively simple thing. For then

the coincidences due to that one agency would be as easy to isolate as the coincidence of a dream and a special occurrence is now. There is almost nothing in the records to indicate that the recorders always understood that, for the purpose of the record, the psychological context was as valuable as the isolated occurrence. The physiological context also is not unimportant; but the details of this are practically none. With the experimental cases we get to firmer ground, but the same difficulties have to be faced. It is, however, in this direction that we must look for final confirmation or rejection. I cannot help feeling that the simple and fascinating hypothesis of telepathic agency has led almost all the recorders of phenomena to put less stress on the part possibly due to agencies already known. Mr. Parish's conclusion is that telepathy is—not proven.

In his last chapter—x.—Mr. Parish touches on the familiar difficulties in "explaining" psychical facts by non-psychical facts. As a matter of method, this is outside his problem. He is entitled to assume a psycho-physical organisation, through which certain phenomena emerge. The "blocking" of paths in this mechanism is merely the forming of another mechanism, through which certain similar phenomena emerge. The ultimate question of the relation of neurosis and psychosis does not fall within the scope of a positive research like this. At the same time, one is glad to have indications of the author's final point of view. Everywhere he is careful not to confuse psychological terms or notions with physiological terms or notions, and he never offers a piece of speculative physiology for more than it is. In an appendix he gives analytical tables of the English and Münich Census of Hallucinations. It remains to add that the book is well written and well rendered in English.

W. LESLIE MACKENZIE.

Ueber die Raumwahrnehmungen des Tastsinnes. Ein Beitrag zur experimentellen Psychologie. Von Dr. VICTOR HENRI. Berlin: Verlag von Reuther u. Reichard, 1898. Pp. xii., 228.

WHEN an object impinges on the skin with sufficient force, we have a tactual sensation, characterised by intensity, quality (pressure, pain, heat, cold), duration and spatiality. The present volume is a monograph on the spatial attributes and relations of touch. It embodies a number of original investigations, carried out by Dr. Henri since 1892, and a review of previous work, experimental and theoretical. Pt. i., 'facts,' deals with tactual space under the three headings of extension (stimulus limen, difference limen, correctness of ideas of space), localisation (with contact and movement, visual localisation, localisation with description), and physiology and pathology (reflex localisation, transplantation, etc.). Pt. ii., 'theories,' has a chapter on the origin and development of the spatial moment in tactual sensations, and

a 'biological and psychological sketch of the spatial perceptions of touch'. A bibliography of 322 titles concludes the book.

The stimulus limen.—Dr. Henri enters upon controversial ground at the outset, in his discussion of the methods of minimal changes and of right and wrong cases. He insists that the procedure without knowledge must in every case be followed, and that the values $\Delta r''_o$ and $\Delta r''_u$ must stand, not for judgments of equality, but for judgments "that the difference has ceased to be clear". I believe, on the contrary, that the method of minimal changes implies the procedure with knowledge as certainly as that of right and wrong cases the procedure without knowledge, and that Wundt is right in his choice of liminal values; and I think that Dr. Henri would have reached the same conclusion if he had attempted an analysis of the general factors of expectation and habituation. He makes a very useful suggestion in regard to the variation of the series in minimal changes (p. 10), though he does not mention Miss Washburn's plan of series-arrangement in right and wrong cases. Vierordt's assumption, that the relative delicacy of the 'space sense' at two places on the skin is inversely proportional to the relative distance apart of the compass points which gives rise at the same two places to an equal number of judgments of 'two,' is shown, by an extension of Müller's argument, to be ungrounded.

The results of liminal determinations are given in great detail. The author argues from them that the influence of practice and fatigue is 'central,' an influence exerted not on the sense impressions themselves but on their apprehension. This is so far in agreement with Dr. Tawney's recent hypothesis of the 'auto-suggestive' character of practice. An interesting section discusses Judd's method of successive æsthesiometric contacts. Judd found, as did Czermak before him, that the second point may be perceived at a different place from the first, while the subject is still unable to pass any judgment of direction. It would be well worth while to make a special investigation of this phenomenon in several sense-departments, having in mind Külpe's hypothesis of the reproduction of the general, and Meyer's criticism of it, as regards tonal discrimination, in the *Zeitschrift* (xvi., p. 359 ff.).

Hardly anything has been done upon the question of the *difference limen.*

Correctness of spatial ideas.—This section contains an investigation of Aristotle's experiment, by the author, which is excellent both in method and execution. Its result is as follows: "If we touch the terminal phalanges of two fingers, first of all in the normal position of the fingers, and then (using the same points on the skin and similar contacts) when the fingers are crossed, the two points of contact appear to occupy very nearly the same relative position in both cases; that which lies on the right in the normal position seems to lie on the right in the crossed position, although the objective contact is here on the left. If the

points of contact are very close together in the normal position, they appear to be very close together in the crossed position, although the objective contacts in the latter case are widely apart." The belief that Miss Washburn's blind subject underestimated the distance between the compass points, as normal subjects do (Wundt, Jastrow), leads Dr. Henri to infer that "the phenomenon has no connexion with visual ideas". The inference is invalid; the author's own results (p. 61) indicate that, in normal cases, there is such a connexion. For the blind, the comparison might be between pressure space (passive) and tactual space (active). As a matter of fact, however, the blind subject in question is not mentioned by Miss Washburn in this regard.[1] The 'puzzle mistake' (perception of two points with a single contact) is due, Dr. Henri says, "to purely physiological causes, though its occurrence is considerably influenced by a procedure with knowledge". Dr. Tawney confirms this statement, though he lays somewhat more emphasis on the subjective factor of autosuggestion. A result which calls for further investigation is this: "If the fingers, in their normal position, are touched by parallel lines, the subject frequently judges that the lines enclose an angle".

The chapter on *localisation* is also largely made up of the author's own investigations. The results are hard to summarise, consisting as they do either of exact introspective analyses or of numerical tables: I can touch upon only a few of them here. A good criticism of Miss Parrish's work is that she made no distinction between the real and the apparent (ideated) place of stimulation. Hence, while her results are perfectly reliable, her theory—overestimation of flexions and underestimation of extensions—stands upon an insecure basis. Dr. Henri devised methods for isolating the two factors, of movement and apparent position. I notice that he omits to take account of the attitude and movements of the head, which I have come to think of some importance. He shows, as against Külpe's local-sign theory, that the movement of localisation alone yields a very inaccurate judgment of position. The criticism, however, is not final; the means of primitive localisation may well fail for us, overgrown as they are by later associations. The experiments on visual localisation lead to the (already familiar) conclusion that "the more 'landmarks' there are in the neighbourhood of the point of stimulation, and the more characteristic the tactual sensation

[1] All that Miss Washburn says is that the blind subject underestimated the breadth of the arm as compared with its length. Her explanation is that "obscure muscular associations influenced the judgments". This fact, of course, has nothing to do with visualisation, as Miss Washburn herself points out.—Dr. Henri makes a similar slip in ascribing to "Steinbuch, Wundt, Bain, Mill, Spencer" the belief that the primitive tactual sensation has the three moments of intensity, quality and *duration*. In general, his abstracts and quotations are exceedingly accurate.

is, the smaller are the errors". It is noteworthy, in view of his absolute rejection of local-sign theories (p. 207 f.), that Dr. Henri speaks throughout this chapter of differences in the 'quality' or 'character' of tactual sensations, as we pass from place to place upon the cutaneous surface—differences which allow of the recognition (*Erkennen*) of the pressure, and which are conditioned by the softness or hardness, thickness or thinness, mobility or immobility of the skin (pp. 106, 122, 126; *cf.* pp. 210, 213). Further research upon Aristotle's experiment shows that with crossed fingers there is a reversal of localisation; the fingers are confused. Külpe should be credited with the statement that just noticeable duality of impressions is not to be identified with just noticeable cutaneous distance (*Outlines*, p. 338).

We come to the chapter on *physiology* and *pathology*. Dr. Henri insists (and the point seems not to have been made before, from the psychological side) that, although certain localising movements are spinal reflexes, reflex localisation is approximate only, and by no means accurate. He discusses eccentric projection in the sense of projection to the extreme periphery (*cf.* the illusions of touch in an amputated extremity), but, curiously, says nothing in the book of eccentric projection in the sense of Lotze's 'sensation of double contact' (*e.g.*, touch at the end of a walking-stick). The subject is treated, though not very satisfactorily, in Dessoir's *Ueber den Hautsinn*, to which Dr. Henri denies the title of 'monograph'. Busch's observations on rhinoplasty (1859) are quoted in full, since, as the author very truly remarks, "they contain facts which are ordinarily overlooked". The general outcome of the chapter is "that the capacity of localisation is in a certain sense independent of the space sense of the skin".

When we pass to the consideration of *theories*, the first question that meets us is: Has the tactual sensation in a primitive consciousness, *e.g.*, in that of the blind new-born child, a moment of spatiality? In other words: Is the spatiality of tactual sensation connate or acquired? The theories are classified by Dr. Henri as follows:

I. Nativistic theories.
   (1) The moment of spatiality is an attribute or partial content of the tactual sensation itself. Hering, Ward, Stumpf, James.
   (2) Spatiality is an immanent attribute of consciousness or mind. Kant, J. Müller, E. H. Weber, Lotze.

II. Genetic theories.
   (1) Tactual spatiality is formed from the primitive moments of intensity and quality, without help from other sense modalities. Herbart, Volkmann, Lipps.
   (2) Spatiality is formed from the primitive moments only by the aid of other modalities. Steinbuch, Wundt, Bain, Spencer, Mill.

(3) Spatiality arises in the course of development, but is in no sense a composition from non-spatial elements.

Each of the first four theories is subjected to a detailed criticism. It is, again, impossible to summarise the arguments: I note a few points. Against James' statement that space is an element in all sensations, Dr. Henri urges the non-existence of auditory space-ideas in the adult consciousness. As against Stumpf's doctrine that quality and extension are partial contents, he points to the fact that, while change of extension affects quality, change of quality does not necessarily affect extension. Lotze's theory is in no sense empiristic; the spatiality of sensation is a *Fähigkeit* of mind, not an attribute of the sensation itself. The nativistic theories in general "cannot be shown by observation to be right or wrong. That theory is the best which ascribes the fewest attributes to the primitive consciousness, while not conflicting with the facts." Herbart's theory stands in the closest relation to his now untenable theory of reproduction. Moreover, as Lotze pointed out, tones fulfil all the conditions required by him, and yet are not spatial. Lipps' 'spatial fusion' is in reality a construction from elements that are already spatial. Wundt's theory has two sets of facts against it. The muscular and articular sensations set up, in Aristotle's experiment, by the crossing of the fingers ought, according to it, to fuse, and so bring about a correct localisation: they do not. And the complete loss of movement sensations after hemisection of the cord ought to be accompanied by a diminution of accuracy of localisation: they are not. The last of the genetic theories is merely thrown out as a suggestion.

The second question is: Wherein consists the spatial moment of a tactual sensation for the developed consciousness, and how are the results of tactual investigation to be explained? The first member of it is answered by a five-page summary of pt. i.; the second by a critique of Weber's sensation-circles and Lotze's and Wundt's local signs, and a sketch of a new theory. Weber's hypothesis is contradicted by histology, by the facts of cutaneous perception of linear extension, and by Aristotle's experiment. The local-sign theories are also inadequate to these last two groups of facts. An objective consideration brings us to the following. 'Automatic localisation exists, in young children as in adults. The movement of localisation here is a connate spinal reflex; the resulting sensation of contact depends on the higher centres. The localising finger moves about, until it hits the exact spot to be localised: what prompts it to do so, we do not know. The finger stops when the stimulating and the localising contacts are congruent (*sich decken*). The basis of attentive localisation is this automatic movement, though visual ideas enter as secondary factors. Visual and verbal localisations are alike of associative origin. Passive cognition of spatial characters is conditioned partly by physiological differences, partly by association.'

The strength of the book lies in its wealth of new material, its appreciation of the value of introspection as a check upon figures (pp. 8, 96, 103, 120, etc.) and of the mutual relation of normal and pathological results, and its keenness of criticism. The author is less happy in construction; he seems to dislike theory simply because it is theory (pp. 185, 204). One of the consequences of this attitude is that he fails to give the reader a perspective, to indicate the critical places in the history of haptics; another is a too rigid demarcation of problems, shown, *e.g.*, by the unfortunate severance of haptical from optical theory. But the merits of the work far outmeasure its blemishes. It will add considerably to the reputation, already high, which Dr. Henri enjoys among experimental psychologists.

E. B. TITCHENER.

Psychologic Foundations of Education. By W. T. HARRIS, LL.D., Commissioner of Education, U.S.A New York: D. Appleton & Co., 1898. Pp. 450. (6s.)

EVERY system must have its Primum Mobile, and in his first chapter Dr. Harris postulates the idea of self-activity as fundamental and necessary. "If the reader denies the existence of self-activity, for him psychology does not and cannot exist." He distinguishes between the mental, internal, subjective side of human activity, and that which comes from the environment —he leads us on to see with Hegel that neither excludes the other, but that both are embraced in a more complete whole. He writes: "There is a mental or subjective coefficient as well as an objective one"; "the business of psychology is to find this subjective coefficient wherever it exists"; again, "psychology is so fundamental that it conditions in large measure all the sciences based on the spiritual nature of man—ethics, theology, politics, sociology, æsthetics, and all forms of philosophy". Thus psychology stands in close relation on the one side to science, specially to physiology, on the other to philosophy. We would fain hope that the *Psychologic Foundations* will supersede some books now placed in the hands of those who seek in our Universities a Teacher's Certificate, and which so far as they are assimilated paralyse the energy by denying self-activity, and destroy the validity of ethical teaching by referring all action to universal environment; it is a great matter to have the issues clearly stated and discussed as in the chapters on "The Fallacy that the Strongest Motive Governs the Will" and on "Freedom *versus* Fate".

The book is divided into three parts—the first deals with the "chief themes of educational psychology treated unsystematically," postponing the systematic treatment, until the student has "some familiarity with the simpler aspects of the principle which furnishes the method". Part ii. deals with the subject systematically. Part iii. includes subjects not usually embraced under the

head of psychology. Dr. Harris writes: "It has happened that psychology recommended for teachers has been mostly of an individualistic character, the principle of participation in spiritual life being ignored. Hence all allusion to the psychology of society, of nations, of institutions, and especially of art and religion, has been omitted." This last is a very interesting section, but my limits will allow me to touch only upon some of the matters treated in section i.—perhaps I may be allowed to deal with the subsequent sections in a later notice.

This is a book of psychologic foundations of education, and the one upon which the whole is built is the postulate that there is in each living thing a self-activity which is the outcome of an original energy—that in all there is more than reaction to environment, there is a self-activity rising gradually through the spontaneity of the plant into the instinctive or formal freedom of the mere animal—up to the real freedom of the intelligent being, who is capable of action as well as reaction.

It is not denied that self-activity is unthinkable under the "category of quality," in terms of the Understanding—but so is anything in the nature of the absolute, the ultimate—space and time and motion, no less than a First cause, and he quotes the ancient sceptical puzzle which denies the possibility of motion—yet these forms of thought are the foundation on which is based all physical science; it is impossible to rest in the finite, Reason compels us to think of space transcending every boundary and of an absolute First Cause. The Understanding has to do with that which is objective to sense, whilst the Reason "holds types, processes, universals". Recollection corresponds with the former and Memory with the latter in the sense used by our author.

Self-activity is ascribed to all living things, and Dr. Harris frequently refers to Aristotle's treatise, in which soul is in some sense ascribed to plants, and a striking parallel is drawn between digestion and perception. He distinguishes three stages of thought—(1) the merely empirical under the category of Sense-perception, atomism, in which all things are regarded as apart; (2) that in which they are seen under the category of quality, or of the Understanding, as related; (3) under the category of Reason, which finds an ultimate self-activity or self-determination, mind giving unity to the whole; the three stages are classed as atheistic, pantheistic, theistic. "The lowest thinking activity inventories things but neglects relations; the middle stage of thinking inventories relations, forces, and processes, and sees things in their essence, but neglects self-relation or totality. The highest stage of thinking knows that all independent being has the form of life or mind, and that the Absolute is a person; it studies all things to discern traces of the creative energy which is the form of the totality." Dr. Harris dwells frequently on the fatal mistake which those commit who occupy the child too long with mere facts instead of leading him

to relations and processes; and that of those who in later life rest in these without proceeding to that *prima philosophia* which deals with the absolute, the ultimate. If we stop in the lower stage of mere empiricism, or proceed to the second and see only relations instead of rising into the highest, there is arrest of development.

The chapter which treats of general terms or class names is specially interesting; he approaches the matter in the opposite direction from that of Locke. A concept is fundamentally different from a mental image, or any number of percepts or mental images combined; the percept has to do with the objective, with the here and now; the concept has to do with forms in the Aristotelian sense, as the sum of continuously acting causes; if we may so express it, when we conceive, we see things in their potentialities as becoming —the individual acorn, the sapling, the oak, the forest are one not in perception but in conception. "The word oak signifies this general concept, which corresponds to the deeper reality of energy which reveals itself in the whole process." It is in this that the human intelligence or second stage of thought seems to differ fundamentally from that of the mere animals to whom all things are percepts; the latter perceive only that which is; man can sow the seed, and gather in the harvest, because he sees things not as they are, but as they are becoming. Sense perceives the object, the Understanding relates it; Reason sees not only the object, but the "form" of the activity which produces this object; thus he shows how we may through this thought conciliate the Nominalist and the Realist, "for the force, the process, is more real than the thing, which it originates, changes, outlasts". These are the ὄντως ὄντα in regard to which the physical objects are but as shadows in the cave. Language, too, is possible only, when we have general ideas, concepts not merely percepts.

We have some very interesting passages in which the author distinguishes between the old mechanical teleology, which regarded nature as a machine, and the later evolution or the unfolding of the idea in its larger sense, and we may perhaps see here the influence of Dante, of whose poem our author is a devout student. Thus gravity is the manifestation of the unity of one body with another. The unity is ideal or potential, but its manifestation is real force, real attraction.

I pass over the intervening chapters which deal more with formal logic, and physiological brain functions, to chapters xv. and xvi. on "The Will"—"The Strongest Motive," and "Freedom *versus* Fate," perhaps the most original and important in the whole book.

The first is headed "The Will". "The centre of pure psychology," he writes, "is this principle of self-activity" which has earlier been shown to be a fundamental postulate. It has been found to be the presupposition of all causal action; of all influence of one body upon another; the will is not a presupposition inferred, but the direct and immediate object of our inner conscious-

ness. We see ourselves as active in volition, originating motion in our bodies, acting on the external world, and setting things in motion to realise thoughts and ideals which we conceive in our minds." The existence of self-activity as mind or will is denied (1) by those who urge that the will is not free because it is ruled by the strongest motive; (2) by those who fix their attention only on the environment.

The author argues that we have in the assumption that the strongest motive determines our will or our action, to take for granted that all reality takes the form of outward perception, and that "a motive is a reality, an existing thing, a force—whereas a motive is a mere possibility, thought, or feeling; when it is realised it ceases to be a motive; it is an ideal of something more desirable than what exists, the motive contains the idea of what is not existent". "I must by my mental activity go out beyond the circle of existence before me, in order to conceive a motive. I must imagine something as happening to the reality, that has not happened, in order to have a motive. The mind, in fact, has to make an abstraction as the first condition for the existence of a motive. The motive is not a real independent thing, but an idea existing in some intelligence which has put an ideal in the place of the real as a product of the activity of that intelligence. To say that a motive constrains the will is therefore to say that something acts before it exists; for the motive has only ideal and not actual existence until it is realised. Thus the will is the creator of the motive as ideal, and of its realisation, and to say that the motive constrains the will is to say that a possible something constrains the actual that creates it, or, in other words, that something acts before it exists."

"In the case of moral motive, the will sets up its own ideal self as motive. In the case of appetite it sets up an ideal condition of some thing or fact as a motive. In the moral ideal the mind conceives the true form of its own highest being—the form of social co-operation with a universe of intelligent beings. The ideal of action that enforces all wills and does not thwart any is the ideal called morality. The author leads us to Kant's definition of right: "So act that thy deed will not contradict itself if it is made the universal act of all intelligent beings"; and in a fine passage, in which Hegelian thought predominates, he shows that the "moral will is free".

"There is a spontaneous or formal will, and a moral or rational will. Both are free so far as the ordinary sense of the word 'free' is concerned, because both are self-active, and both create and use motives. But in a higher sense only the moral will is free, because it alone progressively conquers its environment. It effects this conquest in two ways. First as regards the environment of things and events, the world of material and non-spiritual existence, it makes combinations which result in the production of food, clothing, shelter, and means of intercommunication.

Secondly as regards the human environment, it makes social combinations by adopting ethical forms—forms in which all may act without contradiction, and with mutual help and co-operation."

The chapter on "Freedom *versus* Fate" deals with those who say, "all things have environments, and are what they are, because necessitated through their environments to be such as they are". "Does freedom presuppose fate as its ground, or, on the other hand, does fate presuppose freedom?"

If they are co-ordinate and equally valid, there is a contradiction in the very nature of our thought. Kant and Fichte apparently come to this result in their psychologies. They assert that the mind arrives at insoluble contradictions, but they affirm that all practical life, all moral life, presupposes that the category of freedom is the ultimate and absolute one. Fate would, according to them, apply only to appearances or phenomena, while freedom would apply to being-in-itself or to all true reality.

The argument of the *reductio ad absurdum* is adopted. First, our author says, let us assume all things necessitated by the universal environment, *i.e.*, by "the totality of conditions," which we call Fate. But "if things change, their change is a proof that there was no constraining necessity in the shape of a totality of existing conditions. There must have been a contingency—this thing had other possibilities of existence, and it was not necessitated to remain in one state of reality rather than some other state which was possible to it. But the category of chance does not explain anything; on the contrary, it needs explanation itself, for that which can change a possible state of a thing into a real state of it must be a causal energy. We have found self-activity, therefore, as the ultimate ground of all change, and of all conditioning necessity as well. The thought of necessity or fate—which is the thought of thing and environment elevated to a universal category, the category of quality—therefore shows itself, when dialectically considered, to be grounded in the idea of freedom. The thought of freedom of the will seems impossible to agnostics and to all people just beginning to think logically. Quality is the category of all external observation, and it seems to be absolute. It contradicts the internal category of self-activity, and the novitiate thinker sets the latter aside, supposing that it is illusory. He can perceive by his senses the actual existence of things with environments, while he cannot even fancy or represent self-activity as having being. But careful reflexion will show him that the two categories do not contradict, but that the category of fate or necessity belongs to a lower order than the category of self-activity—fate is partial; self-activity total. The category of necessity belongs to the realm of effects, phenomena; the category of self-activity belongs to the realm of noumena."

The last chapter of part i. is a short discussion of what has been called the old and new psychology.

DOROTHEA BEALE.

VI.—NEW BOOKS.

Studies in Philosophical Criticism and Construction. By Sydney Herbert Mellone, M.A. Lond., D.Sc. Edin. Edinburgh and London: William Blackwood & Sons, 1897. Pp. xxii., 426.

This book is the result of much careful thinking. It cannot be said to make any very distinct philosophical advance, but it is well worth reading, because of the thoroughgoing and conscientious manner in which the author defines and faces his problems. The book is difficult to summarise, because its range is so wide. Dr. Mellone deals with the most perplexing and fundamental difficulties of psychology, epistemology, ethics, logic and ontology. His general position is perhaps best brought out in chap. iii., "On the Distinction of Individual and Universal Judgments". He begins by protesting against the logic of abstract identity, and affirms that "every unity, in order to be thinkable at all and more than a mere name, must combine diversity within it" (p. 119). On this basis he criticises Lotze and also Bradley. The criticism of Bradley appears to us to rest on misunderstanding. To say that Bradley proceeds on an abstract view of the principle of identity, is to say the reverse of the truth. He recognises clearly that all identity must include differences; but for this very reason he denies the existence of true identity if and so far as the identity fails to include its differences, so as to exhibit to the eye of reason their necessary connexion with each other. This is the critical principle employed throughout the first part of his book on *Appearance and Reality*. Considered in this light, Dr. Mellone's strictures are irrelevant. But they indicate the peculiarity of Dr. Mellone's own point of view. When he says that identity may be an identity of differences, he does not mean what most people who use this language intend by it. He does not mean to demand that the identity shall so pervade the differences as to account for their connexion. He is merely concerned to deny that difference is incompatible with identity. Thus the only logical inference which he finds himself able to obtain from his principle of identity is that the universe does not consist of absolutely independent beings—"independent in the sense that any one of them would be unaffected by the annihilation of all the rest" (p. 130). From this notion of harmony he distinguishes that of *real* unity or identity. In this *real* sense, "to assert the Unity or Identity of all things is to assert that they are substantially one, that they are modifications of a single complete Life, in which all the variety of actual existences is felt and thought as a whole" (*ibid.*). Such a conception is not an intellectual necessity: "it is a postulate of that direction or mode of intelligence which is called self-consciousness or reflective self-knowledge, by which we become aware—with more or less of clearness, adequacy and truth—of our personal life as a central unity embracing *more* than knowledge" (p. 131).

A great part of the book is occupied in discussing the nature and content of this knowledge "of our personal life as a central unity embracing

more than knowledge". What Dr. Mellone has to say on this subject is very interesting and suggestive, though by no means satisfying. He lays great emphasis on the threefold nature of consciousness, as knowing, feeling, and striving. He discusses with great care and acuteness the manner in which we take cognisance of those constituents of consciousness which are not in their own nature cognitive. It cannot, however, be said that he has succeeded in overcoming the difficulties which he has inherited from Prof. Ward.

There is much interesting matter in Dr. Mellone's book which we cannot here touch upon. His work may be commended to those who are interested in the topics of which it treats.

EDITOR (G. F. S.).

Dynamic Idealism: an Elementary Course in the Metaphysics of Psychology. By A. H. LLOYD. Chicago: A. C. McClurg & Co. 1898. Pp. x., 248. ($1.00.)

"The Thinker," says Prof. Lloyd (p. 102), "greater than any medium or any uniform, never can be quite clear, even to himself." The author's thought is clearer to the reader in this volume than it was in his *Citizenship and Salvation;* it is still needlessly obscure. His style is also disfigured by mannerisms (inversions, strange uses of adverbs).

An Introduction gives the writer's general standpoint. "What seems not-self is only the reverse of self. . . . Consciousness is fundamentally commercial. . . . The essence of objectivity is sociality." The current view of the objective—the reality of things, the truth of ideas, the worth of acts—affords a scheme of division for the book, whose three parts thus deal with body, mind and soul respectively.

The 'world of things' is "a system of relations, and has its substantiality in its relational character". It is thus "self-active, animate"; and, because intelligible, intelligent. Change, as substantial expression, fulfilment, is essential to this relational character. The intelligence of the body and the dynamic nature of environment (space) show the dualism of self and not-self as one between organically relating factors. The outside world is a tool "originally in the use of self," or rather "a living mediator". Language, the two-faced object, takes us to the world of ideas.

"Matter and mind are one. Matter as organic is intelligent, mind as dynamic is material or substantial. Soul is the substance in which an organic matter and a dynamic mind are one. Individuality survives decomposition because it is involved in relationship. Adjustment, a biological term for the life hereafter, is not acquired but original. The self is not a localised entity, but a functional activity. Ideas are actually, vitally mediative; and consciousness, like ideas, is not ornamental but always useful. Self-consciousness is not of any separate self-hood, but of the living medium of the self's expression. The individual is in himself at once a defined force and a responsible will." Interest is that impulse to self-expression which is of the very nature of consciousness. Language, again, takes us from thinking to doing; from mind to soul.

"The typical act is organic interaction, not arbitrary reaction. Will is not materially creative, but responsibly mediative. Personality, actuality of relationship under a new name, is the substance of the world of acts."

Such, in brief outline, is the system of Relationism or Dynamic Idealism, a system which the author has evidently thought through to the bitter end, and which he will presently, we hope, put before the world in more readable form. The book ends with an appendix on Immortality.

The Development of the Child. By N. OPPENHEIM. New York: The Macmillan Co., 1898. Pp. viii., 296. ($1.25.)

Dr. Oppenheim has written a very interesting and timely book. The thesis of the first three chapters ("Facts in the comparative development of the child") is that the child is not, as is commonly thought, a lesser adult, "slightly different, in the details of small size, deficient strength, little experience, from grown men and women," but that it is an organism of an entirely different character from the developed human being. The facts are well marshalled; something in the way of a bibliography or list of references would have been valuable. Chapter iv., on the comparative importance of heredity and environment, emphasises the immense complexity of the conditions of human, as compared with animal life, and teaches that nurture is of far greater significance than nature. Heredity can at most give predisposition, *i.e.*, so constitute a child that it is "a good growing ground, a good culture medium, for a certain sort of impulse". "As a matter of essential construction, men are all very much alike. . . . The medium in which a child is conceived, born, and nourished is of the most telling value." In chapter v., "The place of the primary school in the development of the child," we have an admirable critique of current kindergarten methods, and no less admirable suggestions towards their betterment. Chapter vi. deals with the place of religion in child life. "It is extremely doubtful whether children are capable of anything better than a travesty on matters of really spiritual import. . . . For them especially is the remark true that conduct is three-fourths of life." Applied ethics should replace religious instruction. Chapters vii. and viii. discuss, very sensibly, the value of the child as a witness in suits at law, and the development of the child criminal. Chapter ix. shows the relation of the child's nurture to the production of the genius and the defective. The author thinks that "the idea of overstrain [resulting from the march of civilisation] is quite out of the question. The one thing which is necessary is an improvement in methods which shall keep pace with the varying circumstances of subjective and objective existence." Chapter x., on institutional life for children, insists that "all thought of massing in large institutions should be absolutely put aside". A final chapter, "The profession of maternity," appeals to the masculine critic as eminently sane and healthy. The book is a notable contribution to the literature of "child study".

Aphasia and other Speech Defects. By H. CHARLTON BASTIAN, M.A., M.D. Lond., F.R.S. With Illustrations. London: H. K. Lewis, 136 Gower Street, W.C., 1898. Pp. viii., 366.

In common with many physiologists and psychologists, Dr. Bastian maintains that all motor consciousness is of peripheral origin, and he insists that it ought to be called *kinæsthetic* rather than *motor*. But he stands almost alone in his view of the relative insignificance of kinæsthetic experience. A tendency to depreciate it pervades and dominates his whole work. He even refuses to make allowance for individual differences. He accounts for the case of Prof. Stricker by saying that introspection inevitably brings the expressive side of speech into undue prominence. This simply shows how very far Dr. Bastian is from having any inkling of the kind of introspective evidence on which such statements as those of Prof. Stricker are based. It would be as reasonable to account for a toothache as an illusion of introspection.

With Dr. Bastian, however, the entirely subordinate and dependent function of Broca's centre is a foregone conclusion, which he is concerned to sustain throughout this book. He regards the auditory element of speech as of altogether predominant importance. Destruction of Broca's centre does not involve verbal amnesia so long as the auditory centre remains unimpaired. On the other hand, complete verbal amnesia follows destruction of the auditory centre. Some of the evidence gives Dr. Bastian trouble; in particular, the case recorded by Pick, in which the auditory centres of both hemispheres were destroyed so as to produce complete word-deafness, and yet the power of fluent speech remained. Dr. Bastian says that the left visual word centre must have supplied the place of the auditory word centre. This may or may not be so; there are other possibilities. At any rate, the existence of this case goes with other evidence to show that the auditory word centre does not possess the exclusive importance which Dr. Bastian is inclined to assign to it.

Apart from these controversial points, Dr. Bastian's book is full of good matter, and throughout deserves careful attention from the psychologist.

The Nature and Development of Animal Intelligence. By WESLEY MILLS. New York: The Macmillan Co., 1898. Pp. xii., 307. ($2.00; London: T. F. Unwin. 10s. 6d.)

This book contains a number of essays and studies which the writer has already published separately at various times and in various places. Thus brought together, they make up a very useful volume.

Part. i. includes four addresses on the general subject of comparative psychology. Prof. Mills emphasises two points: the need of facts, and the danger of underestimating the 'intelligence' of the higher animals. "The evidence of reasoning power is overwhelming for the upper ranks of animals. . . . There is a certain amount of evidence that some animals can count within narrow limits." "It is more than likely that we much underestimate the capacity of animals to communicate with each other by a language of their own." This attitude seems to be shared by Bethe; but Thorndike's recent work makes against it. Part ii. deals principally with feigning in squirrels, and with hibernation and allied states in animals. "The mental process" in feigning "is a complex of instinct pure and simple, with higher intellectual factors added." Prof. Mills admits, however, that the state has many varieties, and does full justice to the cataplexy theory of Preyer. Hibernation is a 'protective' habit, akin to normal sleep, and by no means fixed and rigid in its nature. Part iii., which the author himself regards as "much the most important part of the book," is a valuable record of personal observations on the young of the dog, cat, rabbit and guinea pig, as well as on chicks and young pigeons. The great importance of these recently published researches has been generally recognised. They set an example which comparative psychologists will do well to follow. Part iv. consists of discussions of instinct, in which (besides Prof. Mills) Profs. Baldwin, Lloyd Morgan and Bumpus take part. All the communications are worth reprinting, and Prof. Bumpus' observations on the young kingbird are excellent. The outcome seems to be that instinctive movements are, at first, much more imperfect than is commonly supposed.

The Social Mind and Education. By G. E. VINCENT. New York: The Macmillan Co., 1897. Pp. 155. ($1.25; London, 4s. 6d.)

This essay attempts at once to be historical, critical and constructive. It is, in consequence, far from easy reading, despite the prefixed summary of the argument; and the text is overloaded with quotations.

Chapter i. deals with the social mind and its development. "In the process of social evolution, men's ideas, judgments and desires have been combined into products which, transmitted from generation to generation, react upon individuals, and are in turn modified by them. These 'capitalisations of experience' and their unceasing reactions" form the social mind. "Philosophy in its socially self-conscious phase represents the effort of a mature collective mind to preserve its unity." There follows (chap. ii.) a discussion of social philosophy as a *scientia scientiarum*. The author examines the general classes of sciences gradually formed in the course of social development, and shows that they are naturally and rationally related in a philosophy of society. We then pass to the parallel of social and individual thought: a parallel which is often denied, in view of the short cuts in ontogeny, but which exists, in the sense that both "begin with an indefinite whole, which is gradually differentiated and progressively integrated"; that, in both, analysis yields to synthesis, and vaguely conscious activity to fully self-conscious effort (chap. iii.). The educational function (chap. iv.) is described as "a purposeful social effort to effect short cuts in the mental development of the individual, as well as to hasten the whole process so that he may in the briefest time and in a thoroughly natural way attain the standpoint of the race, *i.e.*, be intrinsically related to the social tradition". Integration of studies is necessary (chap. v.). No particular study can be the core of such integration; social life, and the student in relation to it, form the real centre. Finally, in chapter vi., a tentative curriculum is presented as a basis for discussion and as a suggestion for definite machinery of instruction. The book ends with a bibliography and a good index.

Elements of the Science of Religion. Part I.—Morphological. Being the Gifford Lectures delivered before the University of Edinburgh in 1896. By C. P. TIELE, Theol. D.; Litt. D. (Bonon.); Hon. M.R.A.S., etc. Edinburgh and London: William Blackwood & Sons, 1897. 2 vols. Vol. i. Pp. viii., 302.

Fuller treatment of this work will be deferred until the Second Part can be dealt with. The present volume is concerned with the variety of forms of existence, or different directions of development, of religion. "Each of these forms, by a one-sided elaboration of one leading religious idea, contributes to religious development; none of them singly, but all taken together, represent the religion of a period in the history of mankind" (p. 55). The lowest nature-religions, the highest nature-religions, and the ethical religions, are treated of in lectures iii., iv. and v. under the general heading, "Stages of Development". Then follows (lecture vi.) a discussion of the specifically different directions which may be taken by religions on the same general level of development. Lecture vii. is occupied with "Directions of Development in Particular Religions and in Groups of Kindred Religions". The existence of laws of development in religion is maintained and their nature discussed in lecture viii. The importance of individual initiative is maintained in lecture ix. In x. the general nature of religious development is formulated as an "ever-increasing differentiation, coupled with efforts for reconciliation and unity" (p. 295).

Citizenship and Salvation, or Greek and Jew; a Study in the Philosophy of History. By A. H. Lloyd. Boston: Little, Brown & Co., 1897. Pp. 142.

This little book is full of food for reflexion. One does not need to read far in order to discover the work of a man whose mind is in movement, who is thinking for himself. But, most unfortunately, the style of presentation often comes between writer and reader. Dr. Lloyd tends to express himself by way of formulæ,—a trait to which serious objection need not be taken, *if* the formulæ are set forth with perfect clearness. But this condition happens to be largely unfulfilled. The defect must be traced partly to the author's lack of sense for English style, and partly to his poverty of illustration. It is a thousand pities that a man of evident promise should allow himself to fall into literary habits which will inevitably prevent his being read. In philosophy, more perhaps than in any subject, the medium of expression must be held of the last importance.

The book divides into three parts. First, "The Death of Socrates," containing a philosophy of Greek and Roman civilisation. Secondly, "The Death of Christ," setting forth the Jewish environment, and the relation of the crucifixion to the development of Roman culture. Thirdly, "The Resurrection," which furnishes an interpretation of the influence exercised by Christianity in later times. This last is the most obscure part of the book. Nevertheless, like the other portions, if one will take pains with it, it will be found full of freshness, originality and suggestion. Dr. Lloyd will, perhaps, not take it in ill part if we say that this small work contains matter for a much larger volume. Were he to articulate fully the processes whereby he has arrived at his present conclusions, pay particular attention to his manner of statement, enlarge his stock of illustrations, and shake himself free from a certain paradoxical mannerism, he might produce not merely a good but possibly a great work. The point of view occupied by the writer, to which much of his freshness may be traced, is that of idealistic monism.

The Meaning of Education, and other Lectures and Addresses. By N. M. Butler. New York: The Macmillan Co., 1898. Pp. xi., 230.

Prof. Butler has here brought together seven popular essays and addresses of the years 1894-6. The philosophical basis of all is threefold: the author holds, with Wallace,—and, he might have said, with Darwin,—that natural selection seizes upon psychological as well as upon physical variations; he holds, with Fiske, that the long period of human infancy is responsible for the rise of the family, with all its implications; and he holds that any education is a failure which "does not relate itself to the duties and opportunities of citizenship".

The first essay, on "The Meaning of Education," defines education as "a gradual adjustment to the spiritual possessions of the race," and classifies these possessions as scientific, literary, æsthetic, institutional and religious. The second, entitled "What Knowledge is of Most Worth," decides that "the highest and most enduring knowledge is of the things of the spirit". The third, "Is there a New Education?"—discusses the three sources of the study of education, the physiological, psychological (*i.e.*, Herbartian) and sociological. The remaining four, "Democracy and Education," "The American College and the American University," "The Function of the Secondary School," "The Reform of Secondary

Education in the United States," are of a more technical and concrete type.

Prof. Butler's discussions are sensible and business-like. Occasionally he errs in judgment, as in paralleling "the narrow, plodding specialisation of a Darwin" with that of "Teutonic philologers who are unduly distracted if their investigations cover more than the gerund" (!); and sometimes he exalts his own country on insufficient grounds (pp. 74, 89, etc.). On the whole, the book may rank alongside of President Jordan's *Care and Culture of Men.*

The Study of Man. By A. C. HADDON. New York: G. P. Putnam's Sons, 1898; London: Bliss, Sands & Co. (6s.) Pp. xxv., 410. Illustrated.

This is the first volume of the new "Science Series," edited in America by Prof. Cattell and in England by Mr. Beddard. Its contents are of a rather more popular character than the prospectus of the series had led us to expect. "The book is not intended for scientific students," the preface says, "nor for experts, but for the amateur and . . . the intelligent reader." It contains a number of detached essays, all competently written, on Hair and Eye Colour, the Ethnography of the Dordogne District, the Evolution of the Cart, Toys and Games, etc. The last few chapters, on singing, courting and funeral games, take the author into the sphere of ethnic psychology. They are clear and interesting, but present nothing new. The book ends with some practical suggestions for conducting ethnographical investigations in the British Islands, and with two appendices—the one giving Dr. Brinton's classification of the anthropological sciences, the other a table of metric measurements and their equivalents in inches. It would have been well to relegate the numerous references to a final bibliography: the 'intelligent reader' does not want them at the bottom of the page. And the volume is too heavy (considerably over two pounds), and of an awkward shape.

Memory and its Cultivation. By F. W. EDRIDGE-GREEN. New York: D. Appleton & Co., 1887. Int. Sci. Ser., No. 78. Pp. 311. Price, $1.50.

This is a disappointing book. Its style may be gauged from the sentence: "The word 'forget' is used here and throughout the following pages, not as having the meaning of an impression having become irretrievably lost, but that the power of recalling it has become temporarily or permanently lost". The mind is made up of thirty-seven faculties. There might be a round forty, but that conjugality "is not likely to influence a man who hates his wife," that sublimity is "a very doubtful faculty," and that the author has never seen an example of the faculty of human nature. There are brain centres of motor and sensory memory, and the cortex is the seat of the faculties. A few references to Cattell's reaction experiments constitute the sole mention of modern psychology. The book ends with a list of practical rules, under one of which this stands as an example: "If I wished to remember the name Middlemarsh, I might think of a house standing alone in the middle of a marsh". But is not the name "Middlemarch"?

The Philosophy of the Humanities. By T. FITZ-HUGH. Chicago: University Press, 1897. Pp. 63.

A reprint of three addresses on the subject of the title. "From the standpoint of a voluntaristic metaphysics, the evolution of culture

[shows] an invariable series of phenomena evolving . . . under the impulse of physical and spiritual stimuli, which find their most typical conceptual expression in the terms geography and religion. . . . The three successive stages of culture-achievement, the social-political, the artistic or imaginative, and the philosophical or reflective stage, unfold themselves in the order of psychological process." Since what holds for the race holds for the individual, the order of presentation, imagination and reflexion can be put to pedagogical use. On this basis the author offers a scheme of organisation of the Latin humanities in secondary education.

The Formal and Material Elements of Kant's Ethics. By WILLIAM MORROW WASHINGTON, Ph.D. June, 1898. New York: The Macmillan Co. Pp. 67.

The author of this pamphlet has discovered that it is not always our duty to do the same thing. This appears to be his share in the 'Columbia University Contributions to Philosophy, Psychology and Education'. This is the burden of his criticism on Kant. Kant was seeking by 'a progression from indefinite to definite running through his several works' 'to get a content to his formal principle'; and, as Mr. Washington pathetically informs us (in a bracket), 'He died before he got it'. For the rest, Mr. Washington makes many true and many untrue statements of Kant's doctrine, strung together with child-like inconsequence, following only, quite unintelligently, Kant's order of exposition in the *Grundlegung*, the *Critique*, and the *Metaphysic of Ethics*, respectively. His pamphlet is very earnest, very naïve, and absolutely worthless.

On Laboratory Arts. By R. THRELFALL. London: Macmillan & Co., Limited, 1898. Pp. ix., 338. ($1.50; 6s.)

Although written primarily for students of physics, this little book will be found useful by workers in all sorts of laboratories. In spirit and in execution it is admirable. The four chapters deal with glass-blowing, glass-grinding, electroplating and 'miscellaneous processes'; the two appendices with the preparation of Röntgen vacuum tubes and platinising glass. In many respects the work is of direct value to the experimental psychologist.

The Metaphysic of Experience. By SHADWORTH H. HODGSON, Hon. LL.D. Edin.; Hon. Fellow, C. C. C., Oxford; F.R.Hist.S.; Past President of the Aristotelian Society. London, New York and Bombay: Longmans, Green & Co., 1898. In Four Books. Pp. xix., 459; viii., 403; viii., 446; viii., 503. Price 36s.

The appearance of these four imposing volumes must be regarded as an event of high importance in the philosophical world. They are the mature outcome of a life-work. It is true that the leading ideas expounded in them have been made more or less familiar by Mr. Hodgson's previous books; but these ideas are here stated and applied with a systematic completeness and coherence, a detailed elaboration, and a power and clearness not to be found in the earlier works. What Mr. Hodgson here gives us is a complete system of philosophy, and no one with any real interest in philosophy can afford to neglect it. Full critical notice will follow.

L'Évolution des Idées Générales. Par TH. RIBOT. Paris: Félix Alcan, 1897. Pp. 260.

M. Ribot's new book is characterised by his accustomed clearness, detail and copious reference to other works. It is published as the first of a series, and will be followed, if circumstances permit, by treatises on the unconscious, on perceptions, on images, on the will, etc. The main object of the present volume is to trace the evolution of the processes of abstraction and generalisation from the level of perception up to the highest concepts. "It is a commonplace truth that Abstraction has its degrees as number has its powers; but it is not enough to make this statement. What is important is to fix these degrees by marks which are clear, objective and not arbitrary." Thus, while M. Ribot lays stress on the fact that the psychology of abstraction and generalisation is, in great measure, a psychology of the unconscious, he explains that an inquiry into the nature of the unconscious would be beyond his immediate purpose. The book is a study of general ideas "in so far as they have an origin traceable to experience, and do not overstep its limits".

Three stages are distinguished in the evolution of general ideas. Abstraction, in its lowest form, is prior to language, though not entirely independent of signs. This is the level of generic images. The growth of language brings us to the *concrete-abstract* period, at which words are almost superfluous, and, later, to the stage at which the word is indispensable, and becomes an instrument of substitution. When the third stage is reached, the word is still a symbol, but is now a substitute only for the conscious part of the process. With the development of the concept, the unconscious content becomes more important and the possibility of substitution is lessened. M. Ribot, with Höffding, regards general ideas as existing in the sense that we can concentrate our attention on certain elements of the individual representation. He describes the psychological nature of the highest concepts as twofold: "a clear and conscious element, which is always the word and sometimes in addition a shred of imagery, and a factor which is obscure and unconscious, but without which symbolic thought is no more than an empty mechanism". General ideas are only a particular case of this correlation of conscious and unconscious elements in psychology: *couples conscients-inconscients* is M. Ribot's own phrase. The evolution from image to concept is a process of simplification of the conscious and amplification of the unconscious element.

The importance to psychology of the study of language is strongly emphasised. The first chapter is devoted to a discussion of the degree of abstraction attained by animals, infants and deaf-mutes, the second to a sketch of the development of language, and the third to the degrees of abstraction accompanied by words which intervene between the generic image and the concept. Here two main stages are distinguished, of which the lower is illustrated by references to the language of inferior races and the more advanced by the history of zoological classification, which shows the progress towards scientific terminology.

The chapter on the higher forms of abstraction gives an account of experiments made with a view to answering this question: When one thinks, hears or reads a general term, what is there in consciousness, *immediately and without reflexion*, besides the sign? M. Ribot chose fourteen terms, and questioned orally 103 persons of varying degrees of culture. They were classified, according to their replies, as belonging to the concrete, the visual-typographical or the audile type. A celebrated painter, on hearing the word *number*, was so "concrete" as to reply: "I

see a great many gleaming points". Among metaphysicians the visual-typographical type predominated, and it was common among persons of wide reading. M. Ribot remarks that he was not prepared for the discovery of this type; but it is scarcely surprising that persons who wished to avoid particular associations should fix their attention on the typographical representation of the word spoken. The audile type appeared to be rare; but a learned doctor afforded a striking instance of it. It was not found among the musicians who were interrogated. After an interval of two years the same questions were put to the same persons, with very similar results, whether the previous inquiry was clearly remembered or not. The results, taken as a whole, were inconclusive.

Out of the 900 odd answers which were collected, the one which occurred most frequently was "Nothing". M. Ribot explains this by saying that in such cases the word heard is the only conscious element, and the true content of the concept is in the region of the unconscious. General ideas are *habits*, and we learn to understand a concept as we learn to walk. "What takes place whenever we have in consciousness only the general word is merely a particular case of a very common psychological fact which consists in this: the useful work is done below the level of consciousness, and in consciousness there are only results, signs and marks. . . . All memory is reducible to a latent, organised knowledge which admits of being revived; but not all memory is material for concepts. . . . The potential knowledge which underlies concepts consists of a sum of characteristics, qualities, extracts, which are less numerous, the more the concept approximates to pure symbolism: in other words, what underlies the concept is an abstract memory or a memory of abstracts."

The development of some of the most important concepts is traced with some detail. In the section on Time, for instance, M. Ribot begins by discussing the psychological present. Rhythmic vital sensations, co-ordinated with the regular series which are caused by external sensations, constitute so much of our consciousness of duration as we are sensible of. This is time under its concrete form. Thence, with the development of memory and imagination arises the power of thinking a certain extent of duration, which brings us to the concrete-abstract period, exemplified in uncivilised races, and in the popular conception of time as a vague entity which brings about occurrences. This again prepares the way for the purely abstract concept, which becomes possible when time is known as measurable. In a similar manner the growth is traced of the concepts of number, space, cause, law and species.

It will be seen that M. Ribot has made his position clear by strictly limiting his inquiry, and by explaining and illustrating, rather than elaborating, his theory. With regard to the nature of abstraction and generalisation, he says little more than that all intellectual activity is, generally speaking, reducible to one of two types: association and dissociation. The origin of abstraction must be sought in the causes which excite and maintain attention. It presupposes a dissociation, whether spontaneous or voluntary, acting upon the data of experience; and its true characteristic is the increased intensity of the elements abstracted and the consequent weakening of the other elements. Generalisation "rests on association by similarity"; but, even in its lowest forms, necessitates an act of fusion.

E. F. Stevenson.

Essai sur la Classification des Sciences. Par EDMOND GOBLOT, Ancien élève de l'École normale supérieure, Professeur agrégé de philosophie au lycée de Toulouse, Docteur ès lettres. Paris: Alcan, 1898. Pp. 296.

The present work is inspired chiefly by Auguste Comte, and aims at obtaining, so far as possible, a systematic arrangement of all the Sciences. The thesis of the book is stated in the introduction. All philosophical questions belong to some positive science: if not, they are meaningless. Every distinct science rests on some fundamental notion, beyond which it cannot go. By means of the different fundamental notions, different sciences are classified. Any question as to the fundamental notion itself takes us immediately into the domain of some other science; questions as to number or extension, for example, belong to Psychology.

The body of the work is divided into two parts, entitled "The Formal Unity of Science" and "The System of the Sciences". The first part contends that there are not two methods proper to science, the inductive and deductive, but only two stages in the delevopment of various sciences. Every science—including Arithmetic and Geometry—begins by induction; but when the fundamental notions and the essential definitions have been discovered, deduction takes the place of induction, relations of ideas are shown to be not merely general, but necessary, and everything flows from definitions whose objects need not exist. But deduction does not consist merely of syllogisms, as may be seen by analysing geometrical arguments. Mathematical arguments are not merely formal, but depend always upon the matter; moreover they usually proceed, unlike the syllogism, from the particular to the general—from the sum of the angles of a triangle, for example, to the sum of the angles of any polygon.

The second part discusses the various sciences in detail. Mathematics are prior to all other sciences, because they are required for everything measurable; and within Mathematics, Arithmetic and Algebra have the first place, because they deal with pure quantity. Their fundamental idea is that of quantity, which is equivalent to the ideas of equal, greater and less, but is not definable. The idea of unity (or the unit) need not be added to that of quantity; the mathematical unit is nothing else than the number one, and is constructed, like number, with no help but quantity and augmentation (p. 74).

Geometry is the next science to Arithmetic and Algebra, because its object, extension, apart from numerable things, is alone directly measurable. After a somewhat rambling discussion of projective and metrical geometry—which, by the way, contains several mistakes, as for example, that the axiom of parallels is independent of metrical considerations (p. 91)—the author proceeds to non-Euclidean Geometry, which he declares, following Poincaré, to be equally capable of explaining phenomena, and only to be rejected as being less convenient. On this subject he makes the usual mistakes: for example, he supposes the dimensions of a non-Euclidean space to be not rectilinear (p. 112).

Mechanics, according to M. Goblot, is a new science, because it involves the new idea of velocity. It is the best example of a science which has become deductive as its elementary notions and definitions became elucidated. The laws of motion, he says, are analytical consequences of the definition of force. The view according to which they embody the definition and discovery of mass appears unknown to him, and his remarks on mass (p. 121) show no comprehension of the subject. Mechanics, like all pure sciences, is to him purely abstract, and

wholly independent of the reality of its objects. The difference between Kinematics and Dynamics, which consists in the notion of mass, is denied by M. Goblot; the difference, to him, is that Kinematics deals with real motions only, while Dynamics takes account also of possible motions.

Cosmology, *i.e.*, Physics and Chemistry, is next discussed. The new conception here is that of bodies as actual things. The remainder of the work is occupied with Biology, Psychology and Sociology, which are regarded as forming a single group, whose fundamental idea has not yet emerged, but would appear to be that of end. This portion of the work contains some startling theories, as, *e.g.*, that logic and æsthetics are branches of Sociology; but there is little that is interesting in M. Goblot's discussions of Economics, Morals, etc.

The work appears to have few merits, except an unusually scrupulous acknowledgment of sources. On p. 43, for example, it is asserted that knowledge is power, and M. Egger is cited as having anticipated M. Goblot in the discovery of this novel and weighty aphorism.

B. RUSSELL.

La Morale de Kant. Par ANDRÉ CRESSON. Ouvrage couronné par l'Académie des sciences morales et politiques. Paris: Félix Alcan, 1897. Pp. viii., 203.

This work substantially reproduces an essay written on the subject: "Expound and estimate Kant's Ethics. Examine its foundations and its intrinsic value. Show in what respects it resembles Stoic and Christian Ethics, and wherein it differs from them." Accordingly ninety-seven pages are taken up with an exposition, which has the great merits of being clear, well written and well arranged, but which is not sufficiently profound to do Kant justice. M. Cresson has simplified Kant rather by attributing to him a doctrine, which is only in harmony with some of his expressions, than by laying bare the various ideas which will account for the whole. Accordingly his criticisms, though they certainly point out some errors into which Kant fell, are hardly conclusive against any one of Kant's main contentions. M. Cresson thinks that the fundamental point in Kant's Ethics, which constitutes their striking originality and at the same time utterly condemns them, is their formal character; he attributes Kant's adoption of a formal Ethics (theology apart) to his complete acceptance of psychological hedonism (it is certainly not clear that Kant does accept it) and agrees with Kant that on this basis no *universal* rule of conduct is possible (again a very doubtful assertion). M. Cresson holds that a material Ethics, if possible, must be superior to one that is formal, because, by giving a knowledge of the Good, it will also give a sure criterion of the value of the moral consciousness (p. 140); and he therefore proceeds to destroy Kant's Ethics by proving that a material Ethics is possible. M. Cresson's material ethics is what he calls 'naturalistic,' namely, it rests on the supposition that that to which our nature tends is the good: he does not see that, if this is to be a significant proposition at all, it presupposes the very 'moral consciousness' against which he is arguing. This vital defect must deprive an ethical work of any final value. It reappears in his final contrast of Kant with the naturalism of the Stoics. Kant failed, he says, because he did not ask for *a justification of duty.* Does not M. Cresson see that the question is meaningless? Can he give to the question: Why should I do my duty? any other meaning than: Why is it my duty to do my duty? In short, M. Cresson's naturalism may be

refuted in his own words: 'A fact cannot justify a duty' (p. 193). Or does he think that the existence of his 'primitive tendency' is not a fact?

G. E. MOORE.

Nature et Moralité. Par CHARLES CHABOT, Ancien élève de l'École normal supérieure, Professeur agrégé de philosophie au lycée de Lyon, Docteur dès lettres. Paris: Félix Alcan, 1896. Pp. 287.

This volume of the *Bibliothèque de Philosophie Contemporaine* is an essay on the fundamental principles of morality. The title is perhaps a little misleading, since what is actually presented is not really a special discussion of the various problems involved in the relation of morality to nature, but a general examination of the foundations and character of moral experience. The work consists of three parts, dealing respectively with the form and the content of morality, and with the relation of morals to metaphysics. Finding the characteristic form of morality expressed in the idea of obligation, M. Chabot examines various attempts to interpret this idea in terms of non-moral principles. The discussion of these leads to the conclusion that the derivation of the idea from religious, metaphysical, or social considerations inevitably depends on a *petitio principii*—these giving no basis for the notion except in so far as they already imply it. Similarly, it is shown to be impossible to derive moral obligation from purely intuitive principles, whether of reason or sense.

An interesting feature of this part of M. Chabot's work is his criticism of the attempt to reconcile theoretical and practical experience by asserting the supremacy of will and the dependence of theory on practical issues. This is an evasion of the problem of philosophy which has had considerable vogue in France, and has exerted more influence there than it is likely to obtain in this country; and it is therefore interesting to find a French writer who criticises the point of view in question so admirably as M. Chabot does in this volume.

The second and much largest part of the work is occupied with the discussion of the content of morality. Its relation to the conceptions of good and of utility are considered in two chapters of vigorous and acute criticism; and these are followed by chapters on the relations of the moral end to the True and the Beautiful. The discussions contained in these chapters are particularly fresh and stimulating, and form perhaps the most important and original part of the book.

The third part of the book consists of an essay on the relations of ethics and metaphysics, in which the thesis that ethics cannot be made a mere corollary from metaphysics is maintained with the vigour and acuteness which characterise the volume as a whole.

M. Chabot's essay deserves the attention of all students.

CHARLES DOUGLAS.

L'Année Sociologique. Publiée sous la direction de ÉMILE DURKHEIM, Professeur de sociologie à la Faculté des lettres de l'Université de Bordeaux. Première Année (1896-1897). Paris: Félix Alcan, 1898. Pp. vii., 563.

Four hundred and forty-three out of five hundred and fifty-three pages of text are devoted to critical notices of books. This part of the work is invaluable. It affords a very complete survey of sociological literature in all departments, carried out in detail with great care and skill.

The first hundred and ten pages are occupied by two interesting essays, one by Durkheim on "The Prohibition of Incest and its Origins," and the other by Simmel, on "The Ways in which Forms of Society conserve themselves". Durkheim traces the prohibition of incest to totem-worship. Women of a clan were *tabu* to members of that clan because the blood of the clan was *tabu*, and the blood of the clan was *tabu* because of its connexion with the totem deity. In the course of the discussion much light is thrown on the nature and conditions of exogamy. Simmel's essay is more difficult to summarise, but it is valuable and interesting.

Ethische Studien. Von Ed. von Hartmann. Leipzig: H. Haacke, 1898. Pp. v., 241.

These ethical papers are intended as a supplement to the writer's systematic works: *Phänomenologie des sittlichen Bewusstseins* and *Religionsphilosophie*. Some of them elaborate points of the author's doctrine; others criticise writers who, like Nietzsche and Stirner, have propounded divergent views; others reply to those who, like Schneidewin and Stange, have found fault with Hartmann upon various sides. Of the three classes of papers, the two latter have the most attraction. Hartmann has already set forth his ethical system at great length, and the present volume makes no material addition thereto. But it was interesting to see how a writer who, in outline if not in detail, is so wildly paradoxical would treat brother paradoxers like Stirner and Nietzsche, and how he would defend his own most vulnerable system.

As might be expected, he shows Stirner and Nietzsche no mercy. Stirner was a clever disciple of Fichte, who applied the Fichtean principles to morality in a way never contemplated by their author. In an impudent, fantastic book, *Der Einzige und sein Eigentum*, he argued that if, as Fichte says, the Ego is maker both of its own consciousness and of the non-Ego, it follows that the Ego must be sovereign lord of its own creation. I alone truly exist, and all the rest of the world, my fellow-men included, are but an appearance generated by the working of my own mind. From this Stirner justifies the most absolute egoism and anarchy. Each man is a fool if he does not seek his self-aggrandisement in defiance of everything. Our most sacred conceptions, God, society, humanity, truth, are mere empty bugbears of our own fancy. Hartmann gives an abstract of Stirner's book, and has no difficulty in turning the laugh against his preposterous individualism, which actually seems to enjoy some influence in German anarchist circles at the present day.

The attack upon Nietzsche is of a similar character. Our author denounces him as representing a savage egoism which worships strength and wars upon everything that is humane and tender in man. For Hartmann, though a pessimist, is in no way a misanthropist, like his master, Schopenhauer. Out of his gloomy creed he has managed to extract maxims of social effort and self-sacrifice. To such a spirit Nietzsche's "Will to Power" is revolting. Logically interpreted it glorifies the essential vices of the tyrant, the supercilious oligarch and the social Ishmaelite. And where a tyranny is not in your power, Nietzsche seems to say, it is best to withdraw entirely from the hateful society of your species and sport with your fancies in contempt of all the practical duties of life.

In regard to that part of his book where he defends himself against critics, it would be tiresome to pass in review the various objections

raised and Hartmann's replies to them. They are mostly questions of detail, difficult to make interesting and comprehensible save to the special student of Hartmann's philosophy. But a word may be said on the general intelligibility and consistency of his ethical system. With this system English readers are now tolerably familiar and we need not do more than recapitulate its leading points. The central idea of it is redemption, redemption of God by man. In the beginning, says Hartmann, before this phenomenal world of ours existed, was the Absolute, unconscious, quiescent, holding dormant within itself Will and Idea; or the principles of a logical unconscious Activity and unconscious logical Content. Suddenly, by a *faux pas* (the phrase is Hartmann's own), the Will awoke and pining unappeasably to do and be somewhat, dragged the reluctant Idea with it into its misery. From the struggle between them the process of the world comes into being. The Idea wishing the Will to be quiescent, the Will pining to act. As a means to still this pining the Idea, co-operating with the will, creates the world process which culminates in consciousness. Now it is consciousness which is destined finally to reduce the Will to quiescence. It is in helping to quiet the Will that man finds his moral task. The righteous man is he who recognises his unity with the suffering Unconscious and with his fellowmen and strives to render human life as little miserable as he can and to make the earth as populous and highly civilised as possible. The end of the world, Hartmann hopes, will be as follows: By the development of the human race, the greater part of the will-power in the universe will be found in human minds. Mankind by a simultaneous resolution all over the world will agree to commit suicide, in other words the positive will-power in man will turn to negative. By the act of suicide then, the negative will-power in the universe will exceed the positive and neutralise it; the world process will cease, the phenomenal world will disappear and the unconscious Absolute relieved of its pain will sink back into quiescence. This is the redemption of God by man.

It would be out of place here to enter on a discussion of this great construction, which in its boldness somewhat reminds one of a cosmogony of Aristophanes and is almost equally defenceless against unsympathetic criticism. The interesting question is: Does it furnish an intelligible solution of the problems of ethics? and this question we are compelled to answer in the negative.

The first great flaw in this ethical system is its determinism and denial of human initiative. Man is represented as a mere creature of the Unconscious, a puppet in the power of forces that lie below the conscious level. It follows then that human effort and striving are mere phrases of illusion and that exhortations like that of Hartmann, "labour vigorously in the redeeming world-process as workers in the Lord's vineyard," have no more meaning than if addressed to marionettes. This, however, is a paralogism common to all philosophies which place the supreme reality outside of consciousness, and need not be enlarged on further.

The vital objection to Hartmann's theory, so far as it is peculiar to himself, is that it makes moral conduct unintelligible if interpreted strictly; so much so that Hartmann can only escape manifest absurdity by deserting his own principles. For consider: He assumes at starting that all conduct must have a hedonistic end. This is necessary on his theory of the world. The end of the unconscious Absolute is to get rid of its pain and thus the proper aim of conscious creatures can no less be the diminution of their own misery. But if this be carried out consistently we have mere selfish individual quietism after the doctrine of Schopenhauer. To avoid this Hartmann has recourse to his principle of

"Wesensidentität". Man must recognise the "identity of essence" which makes him one with the Unconscious. The righteous man is he who makes the ends of the unconscious his own ends. The root of evil is the pursuit of individual selfish gratification. Sympathy with the Unconscious then is the supreme virtue of man. But, we ask, how is this sympathy related to hedonism? On what utilitarian ground are we asked to sympathise with the Unconscious? Why should we concern ourselves with its unconscious sufferings? Surely an abstract identity of essence can make no difference one way or the other. To this there can be only one answer. We are asked to work for the Unconscious from the motive of disinterested pity, a quixotic pity, it may be remarked, totally inadequate to move an ordinary mind to any effort or sacrifice. But here the principle of hedonism is given up, and with it the corner stone of Hartmann's ethical system.

That Hartmann should have overlooked these obvious considerations is due, perhaps, partly to a defective sense of humour, partly to a want of insight into the human mind. One feels indeed in reading him that he is far greater as a metaphysician than as a moral philosopher. He runs up a vast metaphysical construction, he exposes with masterly clearness and precision the inconsistencies and partialities of the world-systems of his predecessors. But when he comes down to detail, to human motives and human aims, his work is superficial and mechanical. A shuffling of ethical catch-words, an antithetic argumentation of abstract systems is more in evidence than living personal experience and the sympathetic personal study of man and society.

HENRY STURT.

Ueber den Begriff der Erfahrung bei Helmholtz. Von VICTOR HEYFELDER. Berlin: R. Gaertner, 1897. Pp. 81.

This little monograph contains a critical presentation of the conception of experience, which served as basis for Helmholtz's view of Sense-perception in particular and of scientific knowledge in general. It falls into two parts.

The first section is occupied with a thoughtful examination of Helmholtz's psychological empiricism. The claim of the latter to such treatment is grounded upon the assertion that in the *Physiologische Optik* the empirical theory reached its extreme, and, at the same time, its most tangible expression, an assertion, however, which, in view of some of the criticisms here made, would seem scarcely justified. For we do not proceed far before it becomes manifest that Helmholtz's psychological theory rests upon certain metaphysical assumptions, which prejudge the question as to the nature of knowledge, and to which, in its character of empirical psychology, it had no need to resort. When, for example, "sensations" are said to be "symbols (and in no wise images) of relations in the external world, the meaning of which symbols it is the problem of experience to unfold," the "external world" is at the same time identified with an unknowable *Ding-an-sich*, any positive determination of which it would be a *contradictio in adjecto* to attempt to represent in perception. The author attributes this unwarrantable feature of the theory to the way in which Helmholtz's *Weltansicht* was won, from the point of view, namely, of a scientific naturalism sufficiently removed from the naïve consciousness to avoid regarding sense-qualities as arising from homogeneous archetypes in an external world, but finding no occasion to question the ordinary conception in respect to space and time relations. The inevitable consequence is rightly emphasised, that

in the subsequent treatment the *empirical* relations of the outer sensuous world are unwittingly assumed to be those of the supposed world of things in themselves. Passing to the consideration of the way in which sensuous symbols come to possess definite meanings, Helmholtz's theory of Space-perception and of the psychological origin of the belief in an external world are discussed. As regards the former the author aims to show that Helmholtz's strong disclaimer notwithstanding, the assumed "local signs," both of sight and touch (differing significantly from the local signs of Lotze), are in reality endowed at the outset with spatial qualities. Passages are cited in support of the contention that in Helmholtz's later writings a tendency to the nativistic theory is discernible, and a general perception of space presupposed, in order to account for the localisation of particular points in the spatial field. The theory of "unconscious inference" is subjected to a searching, and, on the whole, sound criticism, although it would have gained in strength had the author drawn attention to the fact that, by the use of the epithet "unconscious," Helmholtz deprives the process of that characteristic in ordinary inference in virtue of which the empiricist claims it as empirical, and endows it with another (immediacy or directness), in virtue of which the nativist claims it as an intuition. In regard to the psychological origin of our belief in an external world, the author thinks that Helmholtz remained consistently true to the theory (derived from Schopenhauer) that it was the result of an *a priori* (or unconscious) inference from a sensuous effect to an outer cause, but that, whereas in his earlier writings this inference preceded all experience, in his later it occupied a less prominent position as following upon processes of association and reproduction. And equally against both forms of the doctrine, the objection is urged that it is an error to represent sensations as originally facts of *inner* experience, which subsequently come to be referred to outer objects, to presuppose, in other words, that the distinction between the Ego and the Non-ego is originally given. The psychological problem is not to explain how states of consciousness acquire an objective reference, but rather how a distinction between the "I-subject" and the "world-object" psychogenetically comes about. In the solution of the latter problem some of Helmholtz's suggestions are of value, particularly the stress he lays upon the importance of feeling and of voluntary activity in the development of mental life.

The second section of the work deals with the subject from the point of view of *Erkenntnistheorie*. Helmholtz's relation to Kant is considered, and the similarity turns out to be little more than verbal, Helmholtz's position being in fact what Kant designated as "transcendental realism". The explanation probably is that Helmholtz's knowledge of the Kantian system was derived mainly from Schopenhauer, whose treatment of Causality, essentially *un*-Kantian, he does little more than reproduce. One cannot help feeling that the comparison with Kant would have been much more satisfactory and thorough had less appeal been made to the tentative arguments of the "Trans-Aesthetic," and the developed conceptions of the Critical Philosophy brought to bear. The author does, however, insist that, so far as the question of the psychological origin of Space-perception and of the idea of a causal nexus is concerned, Kant would have been on the side of the empirical theory, and that the *a priori* character of Space and Time and the Categories rested for him, not upon any uniqueness in the mode of their acquisition by the individual consciousness, but upon the apodictic validity of the judgments founded upon them. Particularly in his treatment of the mathematical axioms, does Helmholtz's fundamental divergence from

Kant become apparent. He confuses two perfectly distinct problems —the psychological, as to how we come to possess knowledge of the axioms, and the epistemological, as to the place they occupy in knowledge as such. Our author runs the antithesis between *a priori* and *a posteriori* elements of experience far too hard, but he does good service in insisting that no solution of either problem is possible so long as psychology and *Erkenntnistheorie* are inextricably blended into one, as is the case in Helmholtz's writings.

G. Dawes Hicks.

Suggestion und Hypnose. Eine psychologische Untersuchung. Von Theodor Lipps. Aus den Sitzungsberichten der philos.-philol. und der histor. Classe der k. bayer. Akad. d. Wiss. 1897. Bd. ii., Heft iii. München: Druck der Akademischen Buchdruckerei von F. Straub, 1898. Pp. 391-522.

This is a most interesting attempt to explain the phenomena of suggestion, as they occur in hypnosis and allied states, on purely psychological grounds. Suggestion is provisionally defined as the production by the revival of an idea of a psychical effect which normally does not follow the revival of this idea. Normally, the revived idea remains an idea, and does not pass into actual sensation; but in suggestion the revival may become hallucinatory. The subject is told that a cat is on the carpet when no cat is there; in consequence the cat appears to him as if it were actually present. Normally, the mere hearing and understanding of a statement does not of itself produce belief, apart from other motives; but in suggestion the mere hearing and understanding of the statement is sufficient. Similarly, a command in itself is sufficient to produce corresponding action, apart from other motives. Lipps explains all these cases of suggestion by his theory of mental reproduction. According to this theory, all reproduction essentially involves a tendency to the complete reinstatement of the process reproduced. Normally, reproduction is only partial, because of the presence of interfering conditions. If these conditions are absent, the reproduced process will be a complete reoccurrence of the original process. Thus the revival of a sense-perception will, apart from interfering conditions, become itself an actual sense-perception of the same kind, the mental representation of a belief will of itself become that belief, the mental representation of ourselves as about to perform an act, will of itself issue in the execution of that act.

The interfering conditions which normally prevent complete reproduction are of manifold kinds; but they are all due to the complexity of mental process. Any given process forms only a partial constituent in a total system. Each constituent process in the total system, in so far as it absorbs psychical energy itself, diverts it from the rest. Besides this, there is in the second place an interchange of psychical energy between different processes, in as much as they are connected by association. Thus, psychical energy, instead of being concentrated in this or that portion of a connected group, tends to become dispersed, and so weakened. This is what Dr. Lipps calls the *Abfluss Tendenz* ("flowing-off tendency"). In the third place, there is a conflict of mental processes, which must be carefully distinguished from their competition. It may be that one mental process is by its very nature exclusive of the other. I cannot represent the same thing as being at once black and white. If *A* tells me it is black, while *B* tells me it is white, there is a mental conflict.

Now, if all these and similar interfering conditions are absent, the reproduction of a process will be free to absorb psychical energy, so as actually to become a reoccurrence of the process which it reproduces. According to Lipps, this is what takes place in hypnotic suggestion. There is in hypnosis a limitation of mental excitability, while the total amount of psychical energy is relatively undiminished. The mental processes called into being by the operator in the subject have the field to themselves. There is an absence of competition, of conflict, and of the "flowing-off tendency". Under these conditions the suggested processes can concentrate all available psychical energy within themselves. Reproductions are thus free to develop into the processes reproduced. Hence to suggest a perception is to produce a perception: and to suggest the belief that the subject will act in a given manner is to cause him to act in this manner.

The most doubtful part of Dr. Lipps's case is the explanation of hallucinatory revival. It is by no means clear that the absence of external stimulus or of equivalent conditions is not of itself sufficient to prevent the passage of mental image into sensation. On the physiological side there may be conditions operative which are equivalent to external stimulation. But apart from this, the question may be raised whether the hallucinatory images of hypnotic subjects do actually possess the vividness and distinctness of sense-perceptions. If one of them is told that there is the picture of a cat on a blank sheet of paper, he will speak and behave as if the cat were actually there. But if a pencil is placed in his hand, and he is asked to trace the outline, the result does not bear out the assumption that there is virtually an actual picture before him. His mental condition may resemble that which we often find in ourselves in dreams. We appear to see objects, although the images of these objects fall very far short of the vividness and distinctness of actual perceptions.

EDITOR (G. F. S.).

Philosophie und Leben. Von ROBERT SCHELLWIEN. Leipzig: Alfred Janssen; London: Williams & Norgate, 1898. Pp. 121.

The author begins by remarking, truly enough, that if philosophy is to recover its influence on mankind it must learn to converse in a human and untechnical language, and presumably intends his own work to be a contribution to this end. If so, however, he can hardly be congratulated on achieving his laudable purpose, and it is to be feared that English readers at least will not find anything either in his manner or in his matter calculated to attract their attention and to render philosophy more palatable and popular. His conclusion, for instance (p. 121), that "there is nothing more important for man to know than what the Will in him is and is capable of, to know that it is his own free power to negate the negativity of the finite, and, recreating it, to live in the centre of Being as the image of deity" bears the old familiar but unattractive stamp of German metaphysics. Nor would this impression do the author an injustice. The truth is that his title is misleading—the philosophy whose relations to life he examines is merely his own. And it consists of a monistic metaphysic of the Will, *à la* Schopenhauer, *minus* the pessimism which gave impressiveness to the metaphysics of that great writer. And as his method is extremely dogmatic and he celebrates the might of the Universal Will with the same extravagance with which his congeners have extolled the Universal Reason, he will probably carry conviction to no one but himself.

Ueber die Bedeutung des Weber'schen Gesetzes: Beiträge zur Psychologie des Vergleichens und Messens. Von A. MEINONG. Hamburg and Leipzig: Leopold Voss, 1896. Pp. 164.

The present work discusses with admirable care and precision the meaning and conditions of the measurement of indivisible quantities, and, in particular, of indivisible psychical quantities. Such measurement is never measurement of the actual quantities concerned, but of a measurable substitute whose changes are correlated with those of the quantities to be measured. The nature of this substitute, as shown by Weber's Law, in the cases where substitutive measurement is possible, is fully dealt with. The author decides that Weber's Law shows stimulus and sensation to be simply proportional: Fechner's Law is rejected. The logarithmic formula, however, applies to the degree of diversity between two sensations or two stimuli. Critical notice will follow.

Saggi sulla Teoria della Conoscenza. Saggio Primo: sui limiti e l'oggetto della conoscenza a priori. Da COSMO GUASTELLA. Palermo, 1897. Pp. 570.

Apart from other considerations this work deserves attention as a sign of the times. It is a fresh indication that the ideas of the English experiential school are gaining ground in Italy, and it is a symptom among many of the renewed consideration now being given to the most complete representative of that school. Signor Guastella may be described as on the whole a disciple of J. S. Mill. He holds that all real knowledge is derived solely from experience and relates solely to phenomena; that matter means a permanent possibility of sensation; that causation means unconditional antecedence; that real inference is always from particulars to particulars; and he accepts the analysis given in Mill's *Logic* of the import of propositions and of the syllogism. Like Mill, though possibly without being indebted to him on this score, he also accepts the fact of which memory and the consciousness of personal identity are but different aspects, as an ultimate and inexplicable condition of experience. But in repelling the claims of the metempirical school, Signor Guastella departs from the tactics of his master. According to him the whole transcendental edifice falls to the ground with the rejection of conceptualism in favour of nominalism; and for this reason he begins with an elaborate refutation of the doctrine of abstract ideas. Even Mill is not nominalist enough for him, our great logician's account of judgments as affirming a co-existence of attributes being in the eyes of the Italian critic a revived conceptualism. General propositions are, he tells us, merely classifications; they assert that one or more concrete objects bear a greater or less resemblance to other concrete objects. In this category of resemblance our author finds the key to the distinction between necessary and contingent truth. For, unlike Mill, he concedes to the Kantians that there is such a distinction, not of degree only but of kind; and that mathematical demonstrations furnish a type of that supreme certainty which is tested by the impossibility of conceiving them to be false. But Kant's ideality of space and time no more satisfies him as an explanation of this certainty than does Mill's theory of inseparable association. Mill was on the right track when he pointed to the resemblance between our mental images of geometrical determinations and the real figures in objective space as that which enables us to discover the properties of the latter by deductive reasoning of infallible assurance; but he did not go far enough. Our author maintains that

mathematical reasoning begins and ends with the perception of resemblances between material objects or between the mental images which are their equivalents, under the particular form of equalities and inequalities. The resemblance is a purely subjective fact produced in our minds by a comparison between the phenomena, not a mode of real existence, as is the position of a phenomenon in the order of simultaneity or succession. Hence we can reason about quantitative relations *a priori* independently of all experience except the experience of our own intellectual operations; but such reasoning gives us no information about real existences; these must be learned by observing the facts of outward sense. It must be noted that Signor Guastella denies the reality of pure space; he agrees with Aristotle in regarding extension as a property of material objects and inconceivable apart from them. Space and time are infinite as possibilities, not as actualities; beyond any object we can think of other objects; before and after any event we can think of other events; but a world without limit in space or time would be a realised infinite—a thing which cannot be thought and which therefore cannot exist. Kantians may justly complain that this inheritor of the Eleatic tradition has totally ignored the arguments of their master to the contrary. It would have been worthy of our author's ingenuity to explain why, if space and time are abstractions, they differ from all other abstractions in being necessarily conceived as single wholes, embracing all partial extensions and durations in their totality, while qualities such as colour exist entire in every concrete instance where they occur, and may be multiplied to infinity in perfect examples of their presence. In one respect, however, Signor Guastella goes thoroughly along with the Kantians. He entirely shares their hostility to the non-Euclidian geometry, and attacks its positions with not less energy than Erhardt. In the psychology of space he parts company with the English associationist school, believing like Prof. William James, whom, however, he does not name, that we see space as we see colour, without any assistance from the muscular sense. It is to be regretted that the bearings of this important issue on the philosophy of mathematics have not been considered.

I have said that Signor Guastella is a phenomenist. He is so in the most absolute sense, rejecting agnosticism of every kind, and subjecting Mr. Herbert Spencer's theory of an unknowable Power behind phenomena to some very brilliant and effective criticism. He would cordially agree with Nietzsche that the apparent world is the only world, and with Mr. F. H. Bradley that the Absolute has no assets but appearances. But neither has he any sympathy with the sceptics. If matter has no meaning apart from a sentient subject there is at any rate a fixed order among our actual and possible sensations. Truth exists, and our minds are so constituted as to recognise it. We are furnished with the data for valid inductions by memory, the trustworthiness of which is postulate number one; we work up these data by the faculty of comparison; and postulate number two demands that the resemblances and differences of our mental representations should correspond to the relations among things in themselves, *i.e.*, the groups of vivid sensations commonly called physical phenomena; and we are enabled to reason from the known to the unknown by postulate number three, which assumes the uniformity of nature. This is indeed taking the *a priori* bull by the horns. Whether the animal will admit to be so treated remains to be seen.

The author promises us two more essays dealing, as would appear, with the more concrete questions of philosophy. They will be looked

forward to with the interest which the industry, ability and sincerity displayed in the present volume deserve; but their success would be better assured if he would pay more attention to the contemporary literature of the subject, and if he would cultivate a somewhat more compact style of exposition. A good analytical table of contents would also be helpful.

A. W. BENN.

Metafisica, Scienza e Moralità. Studi di Filosofia Morale. By FRANCESCO DE SARLO. Roma: 1898. Pp. 143, 77.

This work is a more or less continuous disquisition on the relation of science to philosophy or—as the author states it at the outset—on the relation of moral life to the life of thought in general. It consists of three "chapters," preceded by a preface and an introduction and followed by a conclusion, to which is subjoined an appendix consisting of an essay and an open letter. The chapters are entitled 'Naturalism and Morality,' 'Thelism and Morality,' and 'Idealism and Morality'. The contents of the Appendix are entitled 'Socialism as a Philosophic Conception,' and 'Moral Life and Social Life'—the latter being addressed to Signor Ferrero in friendly and appreciative criticism of some points in his work, *L'Europa Giovane*. Thus far and only thus far are there any schematic or thematic way-posts set up for the reader to acquire a general notion of the lines on which the writer would have him concentrate his mind. *Del resto* there is naught but I., II. and III. —as the nursery-rhyme hath it. Till the Appendix begins there is no indication at the head of the page as to chapter or contents; the sections have no titles; there is never the ghost of an index. The style is at times slipshod and at other times obscure, and the sentences at times run to twenty lines. Why, in so many philosophical works, the well-intentioned reader should be helped in inverse proportion to the abstruseness and other "*esigenze*" of the subject is a curious phenomenon. And while Europe readily acknowledges that Italy, so far from being *la terre des morts*, as was asked not so very long ago, is mentally becoming alive to the fingertips, the Italian language is nevertheless not so familiar to students of philosophy that a book written in that tongue will make itself felt outside Italy, if it call (as the late Editor of this Journal would have said) for much 'burrowing,' through obstacles that might never have been set up. It is true that the main theme is set out again and again so that he who runs may read. But the dissertations not seldom include matter of great interest and suggestiveness; and this makes the difficulty of orientation so much the more to be regretted. Especially is this so with regard to English readers conversant to some extent with Italian. For the preface (pp. xi.-xlvii.), which takes a conspectus of contemporary philosophic thought, discovers in this country a remarkable and highly original revival of "idealism". (Now and again this revival is spoken of as Anglo-American.) It is necessary to gather up the names cited quite incidentally throughout the book to find out, or guess at, whose writings the author has in view—*e.g.*, Fraser, Bradley, A. Seth, Huxley, A. J. Balfour, etc.—but he finds the conditions precedent of this revival in the advance of scientific investigation (of biology, especially) concurring with the regeneration of the æsthetic consciousness of the English, and also "the speculative concepts characterising the preceding school of English philosophy". Moreover the social environment of the country must be reckoned in—one, that is, where "the public itself *si appassiona* for moral questions"—is more preoccupied with ethical and religious life than is the case in any other

country. Such salient features as the author finds in this movement he interweaves with some exposition of his own view of things. Inspired by the manifestation of immanence, which both German idealism and evolutionism seem to him to have in common, he seeks to "integrate" both in theism. Naturalism, or an explanation of the universe by way of phenomenal successions and co-existences, is inadequate, he finds, as postulating, without accounting for, the "valuative," standpoint (love of truth). Thelism, or philosophy of energy and will, is inadequate, as not accounting for knowing and feeling. The ethical spirit, he maintains, is the foundation of the scientific spirit and the indispensable condition of all scientific progress. Here he seems to make too little of the competitive spirit manifested by plenty of very distinguished discoverers. And with respect to *fundamenta prima*, the germs of the scientific spirit may perhaps be traced to curiosity and wonder as well as to "an intuition of values" and "belief in a reality which ought to be investigated".

However this may be, the book will repay those readers to whom it is accessible.

C. A. F. Rhys-Davids.

Received also :—

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E. Kraepelin (herausgegeben von), *Psychologische Arbeiten*, Zweiter Band, 3 Heft, Leipzig, W. Engelmann, 1898, pp. 567.

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E. Martinak, *Zur Psychologie des Sprachlebens* (Separatabdruck aus der "Zeitschrift f. die österr. Gymnasien," 14 Jahrgang, 1898, 1 Heft), London, Williams & Norgate, 1898, pp. 22.

VII.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHICAL REVIEW. Vol. vii., No. 3. **J. G. Schurman.** 'The Genesis of the Critical Philosophy, iii. Psychological.' ["Whether Kant reached his phenomenalism as an hypothesis to explain the antinomies, or as an inference from the ideality of space and time, is a question" of far less importance than that of the underlying psychological doctrine of "the radical distinction between sense and understanding" (1769). Analysis of the *Dissertation* (1770). The further problem (much misunderstood by commentators) is: How can intellectual conceptions or notions, independent of the impressions of experience, give us real objective knowledge? Its solution is the marriage of sense and reason in the *Critique*. Hume is the mediator; the 'dogmatic slumber' was the granting to reason of the power of knowing things in themselves.] **J. Watson.** 'The Metaphysic of Aristotle, iii. The First Principles of Finite Reality.' [(1) Necessity and Contingency. "The individual has a universal nature; but the peculiarities which differentiate one individual from another belong to the 'accidental' or 'contingent'." The former lies within, the latter lie without, the field of science. (2) Truth and Error. "Science contains either judgments which express the necessary combination or separation of attributes as involved in a thing, or conceptions of the essential or permanent nature of real things." (3) The Fundamental Characteristics of Reality. Discussion of substance.] **T. W. Taylor.** 'The Law and Responsibility.' ["The consciousness of wrongdoing is the essential element in responsibility under the law. . . . Personality is conscious being in relation to a certain environment. . . . Granted a certain position, the law neither permits the human being in that position to fall below, nor requires him to rise above, a certain standard."] Discussions. **H. V. Knox.** 'The Duke of Argyll on Purpose in Nature.' [The 'Philosophy of Belief' misses the point of Darwinism, and offers for it nothing more than a miraculous agency.] **H. M. Stanley** and **D. Irons.** 'Primary Emotions.' Reviews of Books. Summaries of Articles. Notices of New Books. Notes.

THE PSYCHOLOGICAL REVIEW. Vol. v., No. 3. **A. H. Pierce.** 'The Illusion of the Kindergarten Patterns.' [Qualitative and quantitative examination of Münsterberg's 'shifted chess-board' figure. The explanation in terms of angle-irradiation holds: change in amount and character of this changes the amount of illusion, and exclusion of it banishes the illusion. The latter (qualitative) result is, however, hardly proved. Figs. 3 and 5 show the illusion; only, since they are printed upside down as compared with the normal Fig. 2, the direction of apparent obliquity is reversed.] **H. M. Stanley.** 'On the Psychology of Religion.' [The earliest emotion in face of power is fear; the religious emotion of worship arose as a useful variation of such fear. Advantageous in the family status, the religious reaction soon became disadvantageous: its development ran counter to the laws of utility and of

specialisation. Even as a socialising agency religion is of merely secondary importance. On the other hand, it is the source both of ethics (action side) and of myth and art (feeling side), and so becomes an end-in-itself, something not objectively but subjectively useful and valid. The same is true of it in philosophical regard, as a factor making for monism. "The evolutionary psychology of religion is, then, beset with difficulties."] **J. Jastrow.** 'A Sorting Apparatus for the Study of Reaction Times.' [Portable apparatus for tests of general (and more especially of children's) mental capacity.] **C. H. Judd.** 'An Optical Illusion.' [A pretty thread illusion (not to be briefly described), which indicates the monocular absence of the depth perception, and the prominence of binocular factors in estimation of the planes of position of monocular images.] **G. Stein.** 'Cultivated Motor Automatism: a Study of Character in its Relation to Attention.' [Planchette experiments. Two types were found: the one 'nervous, high-strung, imaginative,' autosuggestible rather than responsive to outside influence; the other phlegmatic, with little power of concentration, highly suggestible.] Discussion and Reports. **J. Jastrow.** 'The Psychology of Invention.' [Importance of anthropological and pathological work on the question.] **C. Ladd Franklin.** 'The Extended Purkinje Phenomenon (for Grey Lights).' [A somewhat *ex parte* account of Tschermak's recent paper on brightness-equations.] Psychological Literature. New Books. Notes.

Vol. v., No. 4. **G. Tosti.** 'Social Psychology and Sociology.' ["Social psychology is concerned with the genesis of that particular state of consciousness which is consequent in the individual upon the presence of and the contact with his fellows," *i.e.*, with the facts of imitation. "Sociology studies the phenomena that are consequent upon that particular state of consciousness, the social state of mind," *i.e.*, the facts of invention. Appreciation of Tarde.] **J. H. Hyslop.** 'Psychical Research and Coincidences.' [Attempt to show, by detailed study of an individual case, that material coincidences are explicable by "a critical analysis of the individual experience and the usual processes of mind". Critique of Parish.] **C. H. Judd.** 'Visual Perception of the Third Dimension.' [Visual sensations are spatial, in the sense that they are two-dimensional. The third dimension has been derived from movement sensations, and from a given function of mind (Lotze): wrongly. The common factor is, in reality, a relation. "Visual depth is conditioned by a certain relation of contradiction between the two-dimensional data of the retinal images or between the muscle-sensations which are connected with these images." A sketchy paper.] Discussion and Reports. **W. Caldwell.** 'Prof. Titchener's View of the Self.' [Criticism of Outline of Psychology, mainly from the metaphysical standpoint.] **A. MacDonald.** 'A Temporal Algometer.' **J. M. Baldwin.** 'Social Interpretations.' [Reply to Tufts.] **J. McK. Cattell.** 'Prof. Münsterberg on the Danger from Experimental Psychology.' [On the relation of psychology to education.] Psychological Literature. New Books. Notes.

Mon. Suppl. No. 5, Dec., 1897. **J. O. Quantz.** 'Problems in the Psychology of Reading.' [This is a good piece of work upon a timely subject. The questions which the author set himself to answer —the factors that make a rapid reader, the best memory type for acquisition and retention, etc.—are discussed under the headings of visual perception (experiments on forms, colours, connected and disconnected words), sensory types (eye and ear mindedness), the motor type and lip-movement, and the relation of eye to voice in reading aloud. Frequent use is made of correlation curves. An in-

genious apparatus for short exposures, designed by Prof. Jastrow, is figured and described. The writer's conclusions are: that colours are more easily perceived than forms, disconnected words than colours, connected than disconnected words; that eye-mindedness means slightly more rapid reading than ear-mindedness; that rapid readers retain better than slow readers; that lip-movement is a hindrance to rapid, and therefore to intelligent reading; and that the physiological and psychological factors in reading, in order of importance, are visual perception, practice, power of concentration, mental alertness, and scholarly ability. Unfortunately, the excellence of the new work is to some extent offset by undiscriminating use (Cattell, Féré) or neglect (Pillsbury, Goldscheider) of related literature.] PSYCHOLOGICAL INDEX, No. 4. **L. Farrand** and **H. C. Warren**, with the co-operation of **N. Vaschide** and **B. Borchardt.** 'A Bibliography of the Literature of Psychology and Cognate Subjects for 1897.' [Issued in the third week of March: 2465 titles. There are some omissions, and numerous misprints—the 'prodigal' calculators of no. 732 are a new type!—but the whole is a notable piece of work.]

Monograph Supplement, No. 6. **J. P. Hylan.** 'The Fluctuation of Attention.' [The point of departure of this investigation was the empirical fact of "occasional change of feeling for another person, for a certain occupation or amusement," etc. Seven sets of experiments were made. (1) Letters, passing the subject at a given rate in single file, were read aloud, and records of mistakes kept. (2) Columns of figures were added; time of adding and sum given were recorded. (3) Nonsense syllables were exposed and memorised at constant intervals. (4) Addition was 'distracted' by music and by the electric current. (5) Pictures were exposed regularly, and looked at "as long as there was a natural inclination for the subject" to keep his eyes on them. (6) Test of separation of mental functions; alternation of adding and memorising syllables, under certain conditions. (7) Individual records of fluctuation of emotive attitude, ranging over periods between eight months and one month. The author's conclusions may be given in his own words. "Fatigue and recuperation proceed by the same laws for both mental and muscular functions, this being more apparent the more restricted the range of the mental function studied. Fatigue causes diminution or cessation of the primary activity, thus allowing a secondary one to come in and thus cause a fluctuation of attention." The more interesting or intensive the intruder, the less is the degree of fatigue necessary to displacement. "The more complex the object of attention, . . . or the more it chances to meet the taste of the individual, the longer will it hold the attention." "Positive and negative feeling may result from metabolic conditions and strongly influence reason;" indeed, reason is that part of feeling which stands under voluntary control. "A mental function may be developed through the invention of economic devices, and the increased power of holding mental images." Incidental results are: that a 'distraction' may serve to 'prop' the attention; that practice consists largely in increased power to hold and facility to use mental images; that there are three subjective indications of fatigue in such work as adding—vacancy of mind, inrush of extraneous ideas, confusion in the process of addition itself; that the extraneous ideas are often of the most remote kind; that "if [as the experiments make probable] the confining of the attention to one mental function causes another function to be supported by an amount of energy which, when discharging, excludes all irrelevant ideas that would otherwise be a distraction, then such a device for conditioning a function to be measured would be of

considerable value"; etc. A distraction may reinforce attention in three possible ways: by the mutual reinforcement of disparate sensations; by acting as a reminder; by securing economically periods of rest. The author prefers the last hypothesis. A final section, on theory, is of doubtful value. Dr. Hylan believes that "for all practical purposes the attention cannot be divided". This conclusion conflicts directly with De Sanctis' view that distribution is the final stage of attentional development. Indeed, it conflicts with a good deal more. We have spoken recently on several occasions of the lack of respect for previous work shown by some of the American contributions to psychology. Dr. Hylan is a serious offender in this regard. If he dislikes footnotes, he could at least have furnished a bibliography. As it is, the reader is compelled to do the work of comparison for himself, although, in all likelihood, that work has already been done by the author.] Monograph Supplement, No. 8. **E. L. Thorndike.** 'Animal Intelligence, an Experimental Study of the Associative Processes in Animals.' [An interesting and important essay. After a criticism of previous literature, somewhat too severe in tone, the author describes his general method, as follows: "Animals were put when hungry in enclosures from which they could escape by some simple act, such as pulling at a loop of cord, pressing a lever, or stepping on a platform. Food was left outside in sight, and [the animals'] actions observed. Besides recording their general behaviour, special notice was taken of how they succeeded in doing the necessary act (in case they did succeed), and a record was kept of the time that they were in the box before performing the successful pull, or clawing, or bite. This was repeated until the animals had formed a perfect association between the sense-impression of the interior of [a given] box and the impulse leading to the successful movement." Kittens, dogs and chicks were used. The general conclusions are that there is no reason, comparison or inference, perception of similarity, or imitation shown by these animals under these conditions. Neither have they a stock of free ideas; so that animal association is not to be identified with human. "The groundwork of animal associations is not the association of ideas, but the association of idea or sense-impression with impulse." "Impulse means the consciousness accompanying a muscular innervation apart from that feeling of the act which comes from seeing oneself move, from feeling one's body in a different position, etc. It is the direct feeling of the doing." This result will hardly find acceptance; the author's rejection of true imitation in animals probably will. In view of the extended criticism and citation of Prof. C. Ll. Morgan, the reader may be directed to his notice of the essay, in *Nature*, 14th July, 1898.]

American Journal of Psychology. Vol. ix., No. 3. **F. Burk.** 'Growth of Children in Height and Weight.' [Statistics of height and weight. The average American boy and girl. Individual variation, and its factors; daily, weekly and seasonal rhythms of growths. General principles of growth: growth by rhythms, growth by parts, 'persistence' of growth (each individual 'strives to reach some size peculiar' to it), accelerated growth in large and small children, coeducation of the sexes, biological considerations (Minot's view of senescence *vs.* growth, and of the four factors in growing). Psychological aspects of the problem: we must know the "modification of the growing mind by sex, race, nutrition, disease, and by rapid and slow rates of metabolism". Bibliography (109 titles).—A very elaborate and useful study: impossible of summary,

since its object is to set forth the salient facts of the work already done, and to serve as a 'pathfinder' to sources of information, rather than to draw general conclusions. It might have been well to reduce inches to cm., and lb. to kg. in all the tables.] **E. B. Titchener.** 'The English of the Psychophysical Measurement-methods.' [Suggestions of English symbols for the methods. Sample of note-book blank for method work.] **L. Darlington** and **E. B. Talbot.** 'Minor Studies from the Psychological Laboratory of Cornell University, xvi. A Study of Certain Methods of Distracting the Attention, iii. Distraction by Musical Sounds; the Effect of Pitch upon Attention.' [Musical phrases do not distract, but reinforce the attention. They are slightly dynamogenic; but no definite relation can be made out between pitch, on the one hand, and either distracting power or dynamogenic effect, on the other. Double movements are somewhat better, in the comparison of lifted weights, than either upward or downward movements.] **E. B. Titchener.** 'Postscript.' [Reviews the three Studies dealing with distraction of attention. Choice of distractor; relation of partial distraction to total experiment.] **A. Kirschmann.** 'The Representation of Tints and Shades of Colour by Means of Rotating Discs.' [Mathematical deduction of size of sectors for continuous change in arithmetical progression. Modification of formulæ for logarithmic increase and decrease.] **G. S. Hall.** 'Some Aspects of the Early Sense of Self.' [Account based on questionnaire returns. (1) Earliest parts of the physical self to attract attention: hands and fingers, feet, knees, etc. (2) Penetration of the self beneath the bodily surface: bones, stomach, etc. (3) Dress and adornment as factors in the self. (4) The *rôle* of the mirror, and (5) of the child's name. (6) The child's idea of the soul, as shaped like the body, a part of the body, an animal, a flower, etc., etc. (Here occurs an interesting excursus on the method of teaching psychology—one should begin with the soul-theories of savages and children, instead of with the theoretical or experimental discussion of sensation—and on the mental imagery employed for psychic processes by the teacher. Pedagogically, a soulless or epiphenomenal psychology is bad.) (7) 'Philosophic' stirrings in the child's life: questions of the validity of sense impressions, of one's own reality, of one's self-identity (*cf.* the dramatic passion in children); self-bifurcation; protension towards maturity. (8) Influence of foreign selves. The social sense. Conclusion: without neglecting the oracles of psychological individualism, which find the self in intellect or will, we must realise that "soul is vastly larger than consciousness, and the highest powers are those that spring from roots which start deepest down in the scale of life. . . . Child study, because of these limitations of introspection, and even of consciousness, and because the real deeper self can confessedly never be thus known, turns to more purely objective methods."] Psychological Literature. [Titchener on Lipps, and Wundt's Optical Illusions.] Notes and News.

Revue Philosophique. July, 1898. **E. de Roberty.** 'L'Idée d'Évolution et l'hypothèse du psychisme social.' [Too long to summarise.] **G. Compayré.** 'L'Enseignement intégral d'après un livre récent' (par Alexis Bertrand. Paris. 1898). [By 'l'enseignement intégral' is meant the teaching of everything to every one; an education universal both in respect of the pupils who receive it and the knowledge which it imparts. Article discusses the practical and theoretical objections to the scheme.] **Récéjac.** 'L'Inconcevable.' [A study of mysticism as a state of consciousness. The 'Absolute' is too much within us for any 'idea' of it to be possible. We *experience* it, however, and this experi-

ence may be called 'la conscience de l'irrationnel dans les choses'. Instances of such experiences are (1) sensation, (2) the moral life.] Revue générale. Analyses et comptes rendus. Revue (MIND). Correspondance.

August, 1898. **A. Binet.** 'La mesure en psychologie individuelle.' [Describes a series of carefully planned devices for measuring individual intelligence, *e.g.*, powers of memory, susceptibility to suggestion, quickness in grasping sense of passage, etc.] **B. Bourdon.** 'La perception monoculaire de la profondeur.' [Describes experiments made (1) without, (2) with, movements of the head. Inquiry tends to show that latter play very important part in monocular perception of depth.] **G. Gaillard.** 'La recherche du particulier.' [Science has too long remained content with so-called 'universal laws'. By means of these alone no individual fact can be known. 'Chaque phénomène par sa spécialté, sans aller jusqu'à dire qu'il ait une théorie propre, demande tout au moins, pour que sa particularité soit connue et sa disparité résolue, une explication spéciale.'] Notes et discussions. Revue générale. Revue critique. Analyses et comptes rendus.

September, 1898. **L. Dugas.** 'La Dissolution de la Foi.' [Illustrated by passages from *Robert Elsmere*.] **G. Dubreuque.** 'L'Intuition Motrice.' [A psychological inquiry into the *quality* of the intuition of space.] **C. Bos.** 'La Partie Sociale de la Croyance.' [In an assembly of believing persons the belief of each is reinforced by the belief of all. Belief is directly *communicated* without the intervention of language. Language circulates belief, but it is but an inadequate vehicle; since, while belief is individual and unstaple, language is collective and fixed. Uniformity of belief is the cement which ensures the stability of society. Perfectly realised, it would lead to communism. As a principle of synthesis all belief is moral, for 'est moral tout ce qui est source de solidarité'.] Observations et Documents. Analyses et comptes rendus. Revue des périodiques étrangers (the *Psychological Review*).

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 6e Année, No. 3. Mai, 1898. **E. Durkheim.** 'Représentations individuelles, et Représentations collectives.' [A psychologico-metaphysical study, directed against the views of life and mind maintained by Huxley and Maudsley, according to whom mind is a *merely* biological or organic, *i.e.*, material, phenomenon, whose reality is altogether the outcome of its physical conditions. This view of mind has led to a corresponding view of the relation of the individual to society. The sociology thus arrived at is, however, as unsatisfactory as the psychology which formed its basis: and M. Durkheim endeavours to replace the materialistic view of individual and social mind taken by Huxley and Maudsley, with a spiritualistic view which seems to him more philosophical. The terms in which he expresses his conclusions are, he admits, highly metaphysical; yet they are the true equivalent of the natural facts.] **Ch. Dunan.** 'La nature des Corps.' [The molecules of bodies are real in the absolute sense: the bodies themselves are but aggregates, pure *êtres de raison*, and not absolutely real. But these aggregates are what we call 'brute matter'. Thus it has been 'shown twice over that brute matter is not self-subsistent, that its reality is phenomenal or apparent merely; it is nothing but a view-point from which the mind contemplates the true realities—living beings'.] **G. Tarde.** 'Les lois Sociales' (*suite et fin*). [The third of a series of articles, of which the two first appeared in the January and March numbers of this *Revue*, is occupied with the conception of natural 'Adapta-

tion'. This 'expresses the deepest truth which science can discern in the universe'. The writer finds in 'repetition,' and 'opposition' (the themes of the two former articles successively), and lastly 'adaptation,' the highest categories of being or process—the separate lines of direction by which thought must guide itself in its effort to obtain a comprehensive view of the world, of man and of society.] Études critiques, etc.

6 Année, No. 4. Juillet, 1898. **L. Brunschvicg.** 'De quelques préjugés contre la philosophie.' [The tendency of modern times is to place the philosophy of Feeling and Will on the same level as, or on a higher level than, that of Reason. This implies a confusion fatal to spiritual life and to the moral unity of society. Spinoza writes: "The modes of thought, as of love, desire, or any other affection of the soul, cannot be given except on condition that there is given in the same individual the idea of the thing loved, desired, etc.; but the idea can be given without any other mode of thought being given". Spinoza made this an axiom; and it may at least be maintained, though the examples of Kant, Schopenhauer and others show that to regard it as axiomatic would be to presume too far. The writer attempts to maintain it in the interests of true philosophy, which gives their due places to the Feelings and the Will, while avoiding any conflict between these faculties and Reason in the human soul. One must philosophise with the whole soul, not with a part of it. Feeling and Will must, however, be in the service of Thought.] **L. Couturat.** 'Sur les rapports du nombre et de la grandeur.' [This paper deals with a peculiar theory of knowledge, implied in an article of Mr. Bertrand Russell (MIND, vi., No. 23, new series), 'On the Relations of Number and Quantity'. "An article so full of ideas," writes M. Couturat, "that it is very difficult to give a *résumé* of it without weakening its force."] **E. Chartier.** 'Commentaire aux fragments de Jules Lagneau.' [Publishes, under the name of Jules Lagneau, certain MSS. of the latter, and follows them up with a commentary. "Perception supposes metaphysical affirmations;" this assertion is illustrated by reference to particular modes of perception—those of Touch and Hearing. Next comes a paragraph on the theme "The Lower is explained by the Higher". Lagneau had an absolute faith in the value of Reason and of Reason only. (Further papers are to follow.)] Études critiques, etc.

REVUE NÉO-SCOLASTIQUE. No. 17. **M. Mercier** ('La Philosophie de Herbert Spencer') is of opinion that Mr. Herbert Spencer is rather a collector of ideas than the creator of a philosophical system. The Metaphysic and the Rational Psychology of Mr. Spencer are little more than a fusion of the many systems of philosophy which are ultimately traceable to the speculations of Descartes. The consequence of this is that Mr. Spencer's teaching lacks organic unity. **M. Descamps** ('La Science de l'ordre') regrets that no science of order exists. There is an idea of order, there are various applications of this idea; but there is no science of order. It may be said that order is discussed in ontology. This is true, but with reservations. The order discussed in ontology is order as found in the beautiful, or order as found in nature. Discussions like these are far from exhausting the content of order. A science of order as such has no existence. Why is this? Would such a science be wanting in precision? The supposition may not be tolerated. Would it be wanting in importance? Its importance might easily be established. But still the science has no existence. It is to call attention to this defect and to suggest the means of removing it that M. Descamps has written his

paper. **M. de Lantsheere** ('L'Évolution moderne du droit naturel') points out that the "natural rights" theory, which was regarded in the eighteenth century as an absolute and definitive system, has now made way for sociology which views all institutions as essentially relative, and contents itself with seeking out the laws which bring about their changes. Between these two contradictory formulæ stands the philosophy of Hegel engaged in its hopeless attempt to reconcile the relative with the absolute, by ascribing to the absolute the power to develop itself by incessant modifications. **M. Thiéry** ('Was soll Wundt für uns sein') endeavours to show that Wundt, if not an ally of Scholasticism, is, in respect to Psychology, at least, an auxiliary of that system. Wundt may, on ideological grounds, decline to accept the scholastic theory of the substantial union of body and soul; but he none the less admits that that theory is, more than any other, borne out by the facts of science.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE. Bd. xvii., Heft 3, 4. **A. Meinong.** 'Ueber Raddrehung, Rollung und Aberration. Beiträge zur Theorie der Augenbewegungen.' [Criticism of usage; analysis of problem. There are three 'rotation' questions. 1. Does the eye, at the conclusion of a movement, assume such a position that the parts of the retina whose images in the original position were horizontal, vertical, oblique, function in the final position for the perception of the horizontal, vertical, oblique? This is answered in terms of *aberration*, the deviation of the vertical retinal meridian from the absolute vertical (Donders: Wundt takes the horizontal). 2. Does the position of the retinal horizon remain unchanged in relation to the plane of regard? Or (if the position of departure is the primary position): Does the retinal horizon remain continuously in the field of regard—the latter, of course, rising and falling with the movement of regard? This is answered in terms of wheel-torsion. *Torsion* is the deviation of the retinal horizon from the field of regard correlated with the given position of the eyes (Helmholtz). 3. Is the final position of the eye such that it could be carried to this position by 'simple' rotation round an axis perpendicular to the line of regard in its first and second positions? This is answered in terms of *twist*. Twist is the rotation-component of an eye-movement, where rotation means rotation round the line of vision as axis (Hering).] **S. de Sanctis.** 'Studien über die Aufmerksamkeit.' [Summary of the author's studies on attention, carried out for the most part on pathological subjects. It is asserted that the distinction between spontaneous and voluntary attention is misleading: every attention has an 'exponent of voluntariness,' which has to be determined. Attention should be studied by two methods: observation (for 'natural' attention) and experiment (for 'conative' attention). Capacity of distribution of attention marks a higher evolutionary level than does capacity of concentration.] **R. Weinmann.** 'Die erkenntnisstheoretische Stellung des Psychologen: zugleich ein Beitrag zur Begründung der realistischen Denkweise als einzig möglicher.' [Plea for a dualistic realism. "It is true that [epistemologically] there is no primary datum beyond the world of our consciousness; but this can never be understood save as a (more or less adequate) reflexion of an objective external world, existing independently of us (and in so far to be termed transcendent)." A review of the subject-matter of psychology shows that this theory of knowledge is implicit in all psychological thinking. Critique of Schuppe, Avenarius, Cornelius.] **F. Schumann.** 'Ein Contactapparat zur Auslösung elektrischer Signale in variirbaren Intervallen.' [Description of apparatus; sample series of experiments. Reply to Meumann.] Literaturbericht.

Bd. xvii., Heft 5. **A. Pfänder.** 'Das Bewusstsein des Wollens.' [Seeks to show, by a detailed and acute criticism of Münsterberg and James, that a will-feeling, in Lipps' sense, must take rank as a specific content of consciousness. Closes with brief references (which had better have been omitted) to some other psychologists.] **W. von Tschisch.** 'Warum sind Raum und Zeitanschauungen beständig und unentbehrlich?' [The space perception is constant and indispensable, because sensations of movement and of equilibrium have the same characteristics. Thought and idea always involve motor elements (Stricker); movement sensations cannot be inhibited by hypnotic suggestion, without total lapse of consciousness. The time perception gets its attributes from the same sensations of movement, and from obscurely conscious physiological processes (respiration, cardiac activity, etc.). The sensations of movement do not wholly lapse in the deepest sleep; many people, *e.g.*, cannot sleep upon the back. The importance of the periodic physiological processes is vouched for by experiments on the appreciation of time by somnambules and on waking at a given time by autosuggestion, and by the fact that periods of time are best estimated in the absence of all ideas and thoughts. It is to be noted that the bases of the characteristic attributes both of space and of time are prior to the development of the five senses.] Besprechung. [Heymans on Lipps' *Raumaesthetik*, etc.] **H. Rickert.** 'Berichtigung.' **P. Barth.** 'Entgegnung.'

Bd. xvii., Heft 6. **M. Meyer.** 'Ueber Tonverschmelzung und die Theorie der Consonanz.' **C. Stumpf.** 'Die Unmusikalischen und die Tonverschmelzung.' [Partly by way of general criticism, partly as deductions from new experiments (reaction to clangs, effect of shortening the clang-duration, of varying the relative intensity of the components, of distributing the two tones of the clang to the two ears), Dr. Meyer makes a number of rash statements, which Prof. Stumpf promptly 'sits on'. Nothing new is offered, though the discussion may do good as a lesson in caution.] Besprechung. [Stern on Wahle's *Die Philosophie und ihr Ende*.] Literaturbericht.

Philosophische Studien. Bd. xiv., Heft 2. **G. F. Lipps.** 'Untersuchungen über die Grundlagen der Mathematik.' [Continued from Bd. xi.; on the development of the concept of universal number from the relation of ground to consequence. There are four fundamental laws of thought: the principle of identity, rooted in the act of apperception; those of contradiction and of excluded middle, based on that univocal nature of thought which necessarily follows from its serial form; and that of ground and consequence, "the objective principle of logical arrangement, whose primal significance is manifested in every objective relation of dependency". The importance of the fourth principle is overlooked in most theories of knowledge, since their interest is empirical, and ground and consequence are swamped in cause and effect. From this principle the author deduces the concept of universal number, concluding that "not the concept of quantity, but that of the iterable relation of thought, is the basis of universal number and of the mathematical investigations that depend upon it".] **R. Richter.** 'Der Willensbegriff in der Lehre Spinoza's, II.' [*Will in man.* (1) In knowledge. The identification of will and understanding implies a progressive intellectualisation; but the view ceases to appear extreme or paradoxical when we take into account its limitation to judgment, and the results for knowledge itself that follow from the resolution of will into knowledge. (2) Will as impulse, desire, feeling and action. The equation of the impulse to self-preservation with the essence of things, in its metaphysical

and psychological bearings. Ideas as sole conscious material, whose states of tension produce impulse and desire. The relation of will as judgment to will as desire. The antithesis of idea and will in the two first parts of the Ethics. Dependence of feeling on idea; interdependence of feeling and will. The concepts of freedom, action, and power. (3) The ethical will. *Development of the doctrine of will.* Comparison of the Ethics with the *Tract. brev.* Agreement in principles, and in the doctrine of will in God. Differences in interpretation of empirical realities, especially in human psychology.]

ZEITSCHRIFT FÜR PHILOSOPHIE UND PHILOSOPHISCHE KRITIK. Bd. iii., Heft 2. February, 1898. **R. Falckenberg.** 'Aus Hermann Lotzes Briefen an Theodor und Clara Fechner.' **Otto Stock.** 'Psychologische und erkenntnistheoretische Begründung der Ethik.' [It is strange that while the theoretic philosophy of the present owes so much to Kant, the ethical philosophy withdraws itself completely from his influence; especially as Kant himself made Ethics the coping-stone of his speculation. The cause of this is referred to the barren formalism of Kantian Ethics. Here follows an examination of the latter from this standpoint.] **Ludwig Busse.** 'Jahresbericht ueber die Erscheinungen der anglo-amerikanische Litteratur der Jahre 1893-94.' [Here are noticed Armstrong's translation of Falckenberg's *History of Modern Philosophy;* Fullerton's *Spinoza's Ethics* in English; Wallace's *Translation of Hegel's Logic;* also his *Prolegomena to the Study of Hegel's Philosophy;* R. Flint's *Historical Philosophy in France, and French Belgium and Switzerland;* George T. Ladd's *Elements of Physiological Psychology;* Ormond's *Basal Concepts in Philosophy.* Critical remarks are included in each notice.] **Karl Vorländer.** 'Søren Kierkegaard und sein "Angriff auf die Christenheit".' [Kierkegaard is a theologian who accepts the whole content of the Bible as true, being orthodox in the sense that he interprets the sacred writings not literally and verbally, but in the light of his subjective religious needs, subordinating dogma to Ethics.] **A. Döring.** 'Ein Wort pro domo in Bezug auf H. Diels "Parmenides Lehrgedicht".' [The writer defends himself against a criticism by Diels of a paper of his in *Zeitschrift* 104.] **Siegfried Mekler.** 'L. Campbell ueber die Stelle des *Sophistes, Politicus,* and *Philebus,* etc.' [Continues the tribute of admiration which has recently been so freely paid by so many German scholars to Prof. Campbell's Platonic works. These articles will have served one very good purpose if they turn the attention of Prof. Campbell's own countrymen to his Introduction to the *Politicus* and *Sophistes,* and to the Essays appended to the edition of the *Republic,* published by him and Mr. Jowett a few years ago. The *mere* 'scholarship' of English Platonism has too long prevented us from appreciating the really great work done by Prof. Campbell in connexion with Plato. Lutoslawski and the Germans will soon, it is to be hoped, have changed this attitude.] **Dr. Fr. Nagel.** 'Ueber den Begriff der Ursache bei Spinoza und Schopenhauers Kritik desselben.'] Recensionen, etc.

May, 1898. Bd. cxii., Heft 1. **Johannes Volkelt.** 'Die tragische Entladung der Affekte.' [An article suggested by Von Berger's introduction to Theodor Gomperz' recent translation of the Poetics of Aristotle, on the so-called katharsis-literature, and the meaning of Aristotle's famous definition of *τραγῳδία* as *μίμησις πράξεως σπουδαίας καὶ τελείας . . . δι' ἐλέου καὶ φόβου περαίνουσα τὴν τῶν τοιούτων παθημάτων κάθαρσιν.*] **Siegfried Mekler.** 'L. Campbell über die Stelle des *Parmenides,* etc.' [Follows up the line of study which has so recently come into favour with

Platonists in Germany.] **W. Lutoslawski.** 'Stylometrisches.' [The author of *The Origin and Growth of Plato's Logic* defends his stylometric mode of determining the chronology of Plato's Dialogues against the criticism of Zeller.] **Dr. Walter Schmidt** (Breslau). 'Fr. Bacos Theorie der Induktion.' [Examines the Baconian views (A) of the object of knowledge generally; (B) of the knowing subject; (C) of the relation between the object and the subject; and on this examination bases a criticism of Bacon's philosophical method.] **Dr. Fritz Sommerlad** (Giessen). 'Aus dem Leben Philipp Mainländers.' Recensionen, etc.

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE. Jahrg. xxii., Heft 3. **F. Carstanjen.** 'Der Empiriokritizismus. (*Artikel III.*)' [Discusses the 'expression-values' Thing, Thought, Perception and Idea, and explains the theoretical behaviour of the mind by reference to the conception of the vital series. As against Wundt, it is maintained that the philosophy of Avenarius is not a naïve realism.] **E. Reich.** 'Schubert-Soldern über die soziale Frage.' [Discusses Schubert-Soldern's work entitled *Das menschliche Glück und die soziale Frage.*]

ARCHIV FÜR SYSTEMATISCHE PHILOSOPHIE. Bd. iv., Heft 3. **Nicolas von Grot.** 'Die Begriffe der Seele und der psychischen Energie in der Psychologie.' [It is maintained that there is an interchange of energy between material process and conscious process. The hypothesis is propounded that the most immediate correlate of conscious process is not nervous matter, but ether.] **E. Koch.** 'Richard Avenarius' Kritik der reinen Erfahrung (*Schluss*).' **Naville.** 'Le principe général de la classification des sciences.' [Adopts as principle of division the three questions: What is possible? What is real? and What is good?] JAHRESBERICHT über die Erscheinungen auf dem Gebiete der systematischen Philosophie: **F. Jodl.** 'Jahresbericht über die Erscheinungen der Ethik aus dem Jahre 1895.'

PHILOSOPHISCHES JAHRBUCH. Band xi., Heft 1. **C. Gutberlet.** 'Die Krisis in der Psychologie.' [Psychology is ever occupying more ground, and threatens to absorb the whole of Philosophy, Logic, Metaphysic, Ethic and Law. Most modern Psychologists take a purely experimental standpoint, as is proved by quotations. But Empiricism cannot be a foundation for any science; even more than old Nominalism, it renders all science impossible.] **Jos. Geyser.** 'Der Begriff der Körpermasse.' [*Conclusion.* Admitting ultimate atoms, we must admit that they are extended; inextended atoms are an absurdity. They must also have density, as a principle of unity and resistance to outward impacts, and the writer considers that elasticity is also an essential attribute of these atoms.] **Fr. X. Pfeifer.** 'Ueber den Begriff der Auslösung.' [Conclusion. The author continues to follow the process of 'Auslösung' (or the setting free of one activity by another) in the problem of sensitive and intellectual cognition. The outward stimulus sets free the sensitive act; this in its turn occasions internal feeling, and in presence of the latter, the intellect acts and produces the idea. In neither case ought 'Auslösung' to be confounded with 'cause'.] **E. Dentler.** 'Der Νοῦς nach Anaxagoras.' [In this first article the writer endeavours to set forth Anaxagoras' idea of the *νοῦς*, as principle of the universe, its immateriality, aseity, simplicity and omniscience; correcting and explaining the fragments which remain to us, by means of passages of Aristotle referring to Anaxagoras or his doctrine.] **J. Bach.** 'Zur Ges-

chichte der Schätzung der lebenden Kräfte'. [Continuation. Descartes' idea of matter was mere extension, this was combated by Leibniz, who rightly added to that idea mobility and resistance. In matter tending to move but resisted by other matter, we must also admit *vis mortua*; if it actually moves, it has *vis viva*, which increases in proportion to the square of its velocity. From the conservation of energy we deduce the constancy of the laws of nature.]

RIVISTA ITALIANA DI FILOSOFIA. January-February, **L. Ferri.** 'L'Evoluzione Filosofica.' [In the general history of human culture, philosophy has always been preceded by dogmatic Theology. The next step has been to determine, define and systematise the body of ascertained truth underlying the beliefs of Theology. When Theology is rationalised and freed from external authority, it tends to become Philosophy. Philosophy is defined in a Hegelian sense as the unity and totality of all knowledge, and contains within itself an analytic and synthetic process, or as the writer later explains, an external and internal aspect. The *external* consists mainly in the relation of Philosophy to the various special sciences, in which connection it is shown how the various sciences split off from general Philosophy, and conversely how science has repaid its debt to Philosophy by providing new material in many directions. The *internal* aspect of the Evolution of Philosophy consists in an ever-growing profundity in the examination of the fundamental Ideas of Thought, joined with a more precise determination both of the powers and limits of thought, and this idea is traced out in an outline of various tendencies of modern thought.] **A. Codara.** 'Seneca Filosofo e S. Paolo P. Covotti Il "Cósmos Noetós" di Plotino nella sua Posizione Storica.' [Both of which are continuations of discussions already noticed.] **A. Gnesotto.** 'Interesse e Disinteresse nei Sentimenti ed in particolare nei Sentimenti Morali.' [This is a criticism of views recently published by Prof. Cantoni. The writer maintains, by a review of the various classes of feelings, that feeling as such cannot inspire a truly disinterested action. Morality can only spring from the "divine idea of duty," and the fact that the moral law is "disinterested" tends to show the existence of disinterested feelings.] **G. B. Gerini.** 'Di una Definizione dell' Allievo criticata dal Professore Morando.' Bollettino. Rivista Straniere. Recenti Pubblicazioni.

VIII.—NOTE.

AWARD OF WELBY PRIZE.

The Welby Prize of £50, offered for the best essay on 'The causes of the present obscurity and confusion in psychological and philosophical terminology, and the directions in which we may hope for efficient practical remedy,' has been awarded to Dr. Ferdinand Tönnies, of Hamburg. A translation of the successful essay will appear in MIND shortly.

ERRATUM. (JULY, 1898.)

P. 438, l. 1, for "Weismann" read "Wasmann".

MSS. and other Communications for the Editor, except those from America, should be addressed to Mr. G. F. STOUT, University, Aberdeen, N.B. All American Communications should be addressed to Professor E. B. TITCHENER, Cornell University, Ithaca, N.Y.

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MIND

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OF
PSYCHOLOGY AND PHILOSOPHY.

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G. F. STOUT,
WITH THE CO-OPERATION OF PROFESSOR H. SIDGWICK, DR. E. CAIRD, DR. VENN, PROFESSOR WARD, AND PROFESSOR E. B. TITCHENER.

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